

LEATH & ROSS,

THE OLD-ESTABLISHED

HOMŒOPATHIC CHEMISTS,

Continue to supply their well-known brand of

HOMŒOPATHIC MEDICINES

To all parts of the civilised world on the most advantageous terms.

SEND FOR ORDER FORMS AND PRICE LIST.

PILULES & TINCTURES,

Put up in 1s. Bottles, ready for sale, **3s. 9d. per Dozen**, in neat Cardboard Cases, done up in outers containing $\frac{1}{2}$ dozen and 1 dozen in each.

PROPRIETARY ARTICLES COMMANDING A LARGE SALE:—

GLYKALINE,

THE CURE FOR

Catarrhs, Hay Fever, and Colds.

LEATH & ROSS'S GLYKALINE is now admitted to be the best and speediest cure for Catarrhs, Influenza, and Bronchitis. Taken at intervals of one hour, these diseases vanish like magic, and leave no trace behind by which to remember them. Try it! In Bottles, 1s. 3d., free by Post. 40,000 have been sold.

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THE CURE FOR

Neuralgia, Faceache, or Tic-Doloureux

LEATH & ROSS'S NEURALINE is now a well-known and acknowledged cure for the above complaints; scarcely ever fails to afford relief in a few moments from the most maddening pains. Should be in every household, and used at the earliest moment. In Bottles, 1s. 3d., free by Post. 52,000 have been sold.

PHOSPHO-MURIATE OF QUININE.

THE SPECIFIC FOR

DEBILITY, EXHAUSTION, & NERVOUSNESS.

Gives tone and energy to body and mind. In Bottles, 1s. 1½d. and 2s. 9d. each.

CHENOPODIUM WORM POWDERS

Still maintain their great popularity. In Boxes, 1s. 9d. and 2s. 9d. each. Orders coming in for them from all parts of the world, in quantities from 200 to 400 at a time.

Indentors should always include these four celebrated preparations in their indents. The first three, in gross quantities, 8s. 6d. per dozen net; the fourth, in any quantity, at 13s. 6d. and 19s. 10d. per dozen net.

SPECIAL QUOTATIONS TO LARGE BUYERS AND TO SHIPPERS.

LEATH & ROSS,

9 Vere Street, W., and 5 St. Paul's Churchyard, E.C.,
LONDON.

MODERN REMEDIES.

Schering's Piperazine and Phenocoll Hydrochloride, Gout and Rheumatism Specifics.

WE have pleasure in noting that during the past few months the use of these remedies has steadily increased in the United Kingdom. This is in harmony with their growing popularity on the Continent, where there has been no sudden rush to extol either **PIPERAZINE** or **PHENOCOLL** as new remedies, but rather a gradual and growing confidence based upon continued clinical experience. As we are in receipt of many letters from medical men in regard to these medicines, we wish to call the attention of pharmacists to some of them, and to the large volume of business which is thus opened.

PIPERAZINE is a synthetical compound (diethylene diamine, $C_4H_{10}N_2$) occurring in acicular crystals, which readily dissolve in water. It possesses the property of dissolving urates more freely than any other known substance. This was graphically shown in a note which recently appeared in *THE CHEMIST AND DRUGGIST*, which we quote:—

Interesting experiments have been made recently in Schering's research laboratory on the action of piperazine upon artificial urinary calculi. The design was to ascertain whether piperazine had any solvent effect upon these. The result of the experiment showed that all the forms of concretions dissolved freely and perfectly within a comparatively short time in a 1-per-cent. piperazine solution. In a few cases nothing remained but a light honeycombed skeleton, which consisted of the hardened cementing mucus. This is given, and has proved a very efficacious remedy in gout; the dose being from 2 to 5 grains three daily.

PHENOCOLL HYDROCHLORIDE is the salt of a soluble derivative of phenetidin. It is a white crystalline powder, soluble in 16 parts of water. It is a powerful antipyretic and antirheumatic, superior to phenacetin in being soluble and in its non-toxic action. It has proved of great benefit in the treatment of rheumatic fever, no other remedy having such a beneficial influence upon the swollen joints as phenocoll hydrochloride. This, in association with the fever-reducing properties, makes the remedy of unique importance. Recent observations also show phenocoll hydrochloride to be of great value in the treatment of neuralgia. The dose of the remedy is 5 to 10 grains three times a day. It is also given, in association with piperazine, as a gout-water. The phenocoll allays the pain, and the piperazine removes the cause.

These paragraphs state briefly the properties and uses of these modern remedies. The following letters from medical men indicate the interest taken in the matter:—

I.—A West-end Physician writes as follows:—

"I should be glad to know if you can procure for me some Piperazin pure. The chemists here ask such outrageously high prices that experiments which I am anxious to make would seem impossible."

II.—The Head Physician of a hospital in the metropolis writes:—

"Is it correct that a prescription of 6 grammes Piperazin-Phenocoll should be charged 30s. to a patient of mine? Surely there must be some mistake."

III.—A Torquay Medical Man writes:—

"I am anxious to give Piperazine a trial in a very suitable case, but I cannot procure it here. Kindly let me know where I am to apply for it."

IV.—A Derbyshire Medical Practitioner writes:—

"Will you kindly inform me if there is any difficulty in obtaining Piperazine and Phenocoll, as pharmacists in this part profess not to know these preparations?"

V.—A Brighton Chemist asks:—

"Is it correct that I should be charged 6d. per gram for Piperazin pure, of which I require a drachm for a prescription?"

A number of similar complaints are coming daily to hand.

There ought to be no difficulty whatever in obtaining these remedies. As the agents of the manufacturers we carry stock and supply the trade through wholesale houses only. They may be obtained from any wholesale house, **Piperazin. pur. at 17/6 per oz. net**, and **Phenocoll Hydrochloride at 3/6 per oz. net**. If any pharmacist finds difficulty in obtaining the remedies we should be communicated with.

To aid pharmacists in advising physicians in regard to the use of Piperazine and Phenocoll Hydrochloride, we shall be glad to supply, on application, copies of *The Therapist*, containing clinical and therapeutical reports, and of a new pamphlet which we shall publish on January 1, 1892. Smart business men may find it advantageous to present the pamphlet to their gouty and rheumatic customers; if so, we shall be glad to hear from them.

A. & M. ZIMMERMANN,

6 AND 7 CROSS LANE, ST. MARY-AT-HILL, LONDON, E.C.,

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The Chemische Fabrik auf Aktien (vormals E. Schering), Berlin,
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Floral Extract, 3/6, 5/-,
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CONCENTRATED

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Stimulating Lotion, 5/-,
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Astringent and Tonic
Lotion, 5/-, 10/6.

Quinine and Arnica
Hair Wash, 3/6,
5/-, 10/6, 21/-.

Arnica Wash
3/6, 5/-,
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EUCHRISMA.
Combines in one clear fluid every valuable
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An elegant Preparation for
the Hair and Beard.
Price 2/6, 3/6, 5/-, 10/6, 21/-.

EAU RACINE.
For renewing the original colour of Grey Hair;
superior to all other Restorers, being perfectly
simple in its Composition. Price 2/-.

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H. P. TRUEFITT'S TONIC TOOTH BRUSH

(BY ROYAL LETTERS PATENT.)

PRICE ONE SHILLING.

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**Absolutely Genuine Paraffinum Molle of the
very Purest Form, and we claim that it
is superior to Vaseline.**

PACKED IN TINS, 1, 5, 10, 14, 28, 56, and 112 lbs. Also in 3-cwt. Casks

"OLEUM DEELINÆ"

(REGISTERED).

UNIVERSALLY ADOPTED BY THE MEDICAL PROFESSION FOR
OPHTHALMIA, SCURVY, RINGWORM,
ECZEMA, SKIN-DISEASES,

For External and Internal Irritation of every kind.

PACKED IN CASES—

One Doz. 1s. 6d. Bottles; One Doz. 2s. 6d. Bottles.
Pint Bottles, 4s. 6d. each, for Hospitals and Dispensing
Chemists.

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For Public Speakers, Actors, and Singers.
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PARAFFINUM MOLLE, B.P.

(PIONEER BRAND) Registered Trade Mark.

Equal to and Cheaper than **VASELINE**.

FOR MEDICAL AND PHARMACEUTICAL PURPOSES.

**WHITE, YELLOW, VETERINARY,
AND WATERPROOF.**

We have the pleasure to inform our Customers and Chemists and Druggists generally that we are still supplying the above in **bulk**, and intend to continue to do so. We are sending out all qualities in the following size Packages:—

1-lb., 5-lb., 7-lb., 14-lb., 28-lb., and 56-lb. Self-Opening Patent Tins; also, 1-cwt. Wood Kegs and 300-lb. Barrels.

We guarantee our Jelly to be perfectly pure, and not a mixture of Wax and Oil.

Our process of manufacture is to evaporate and sweeten the crude material by hot air, and then filter through animal charcoal, **no acids or alkalies** of any description being used during the process.

Extract from "THE CHEMIST AND DRUGGIST," October 18, 1890:—

"All the Petroleum Jellies which they send us we find to be good products—thus, the 'White' is a soft, slightly granular body, having a uniform melting-point of 45° C. The 'Pure Yellow' is of good colour and consistency, and is non-granular, its specific gravity at 50° C. being 0.851, and melting-point 40° C. The company also make a jelly for veterinary purposes, which has a higher melting-point—viz., 47° C. It is darker than the pure, and has a faint petroleum odour. Another variety is called 'Waterproof'; it is perfectly black, and should make a good dubbin for boots, harness, and the like."

Pure Castor Oil, Cod Liver Oil, White Mineral Oil, Best Eating Olive Oil, Pale and Crude Carbolic Acid, Carbolic Powders, Sheep Dip, Benzine 50 per cent. and 90 per cent., Crude and Rectified Spirits of Tar, Stockholm Tar, Camphor Ice, Carbon Candles.

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THE NEW AND POPULAR DISINFECTING POWDER.

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Extra Large 1st. Decorated Tin Boxes, at 6.6 per gross.
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 And in Bulk, from 30th per Owt., in Casks.

The above Quotations should
interest all Buyers.



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EQUAL TO
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THE
CROWN CHEMICAL WORKS,
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No BATH ROOM or CARRIAGE is fully Equipped without

RANKIN'S CORK MATS

Warm, Soft, and Dry, Easily Washed, Clean, and Durable.
They Prevent Chills in Bathing, and keep the feet warm and comfortable.
Mr. GLADSTONE pronounces them to be very useful, and Lord SALISBURY
and many of the Nobility and Gentry now use and appreciate them. They prevent
cold feet in Driving, in Church, in the Counting-house, in Stone-floored Apartments.
Numerous testimonials to their usefulness in a great variety of ways.
Sizes: 1 ft. square to 20 x 45 in. Prices: 3/6, 7/6, and 10/6 each. Special Mats
up to 21/ each. Of all leading Chemists and Furnishing Houses.

CAUTION.—Each Genuine Mat branded "Rankin's Cork Mat."
Wholesale terms on application to

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COLOURED SIDE MARK, LABEL, AND OTHER SPECIALITY CAPSULES

(For the Prevention of Fraud and Refilling of Old Labelled Bottles), as supplied to BASS & Co., HENNESSY AND
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PLAIN ORDINARY CAPSULES,

For Small Phials, 2s. 6d. and upwards per 1,000, according to size, style, design, and quantity.

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Manufacturers of Pure English-made Bottling and Package Tinfoil, from 1s. per
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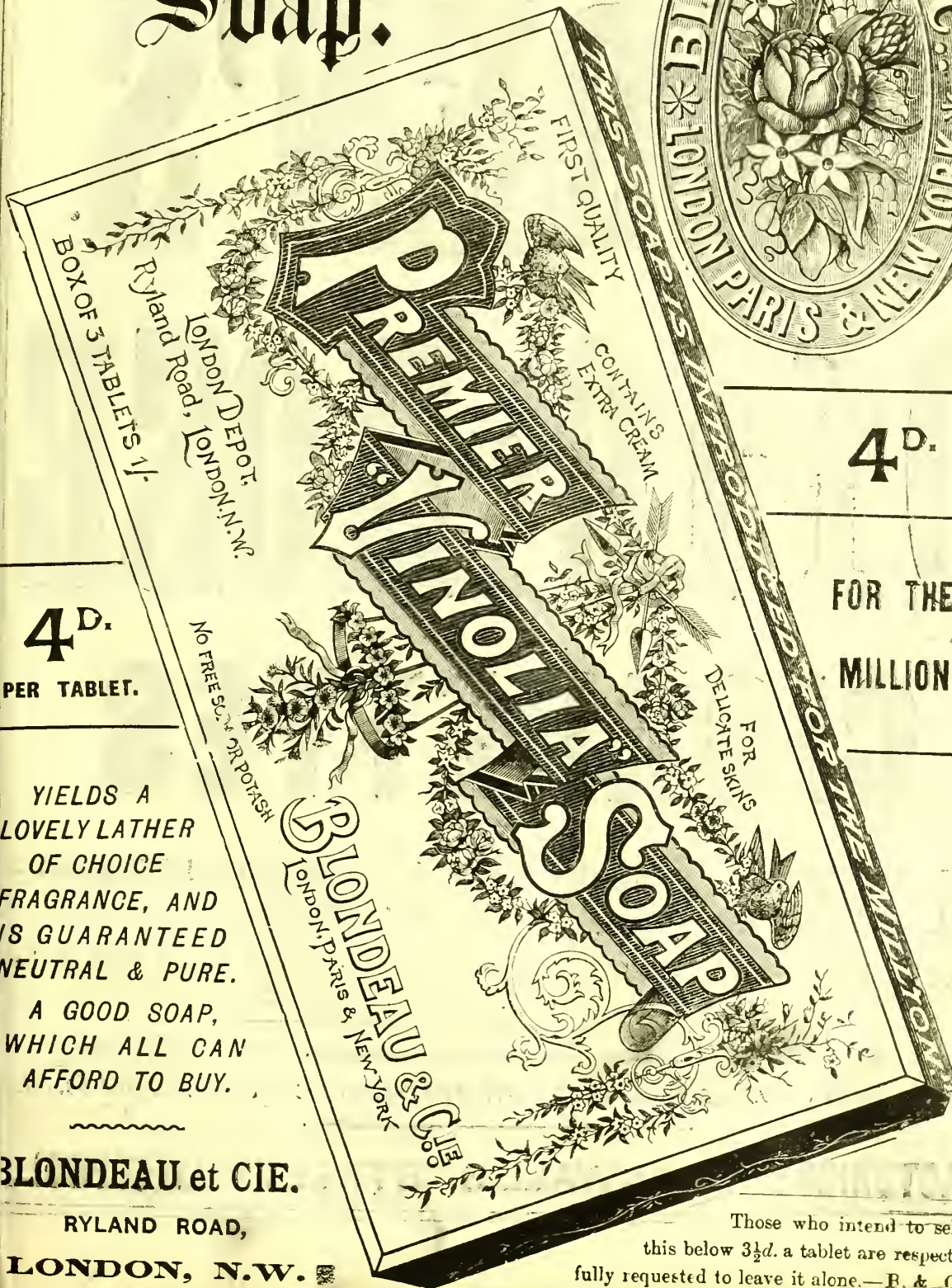
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Those who intend to sell
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IN BOXES containing 20 packets of 10 Cigarettes each. **PRICE 40/-**
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ORDERS for 5 Boxes (1,000 Cigarettes) are carriage prepaid to any part of the Kingdom, and are subject to 5 per cent. discount.

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DRUGGISTS'
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A REVISED EDITION

OF

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Principals: { Mr. R. B. GREAVES, Ph.C., F.C.S.
Mr. J. W. J. TURNER.

At the recent Minor Examinations THREE Students were sent in—
ALL passed at FIRST attempt from here:—
Messrs. Flemons, Dimbleby, and Houston.

The Classes for the February and April Examinations
commence MONDAY, JANUARY 4, 1892.

The Principals will be pleased to give any particulars as to classes,
fees, &c. Prospectus on application.

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THE MANCHESTER COLLEGE OF PHARMACY, 225 & 227a OXFORD STREET, MANCHESTER. ESTABLISHED IN MANCHESTER 1882.

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MR. CHARLES TURNER, F.C.S.

The Next Course will begin on January 4.
Full particulars of the various Sets of Classes for the
MINOR and MAJOR—each one complete and distinct
from all the others—are given in the Copyright Prospectus
of the M.C.P., which will be sent to any address free on
application.

It should be noticed that the fees are low and inclusive, and that the work done is

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SCHOOL, GREAT ORMOND STREET, BLOOMSBURY, W.C.

President—THE LORD EBERY. Chairman—MAJOR WM. VAPORHAN MORGAN.
Contains 31 3/4, and being entirely supported by Voluntary Contributions, Donations
and Annual Subscriptions are earnestly solicited. The Hospital is always
open to the inspection of visitors, and Clinical Instruction is given in the Wards
and Out-patient Department to Medical Students and Practitioners. It possesses a
valuable Library of Homoeopathic Publications, which Medical Men are invited to
study. They are also invited to visit the Dispensary. The In-patients number
over 700 annually; the Out-patients nearly 9,000 annually. The number of
Patients treated since the inauguration in 1849 exceeds 215,000. It has a staff of
2 Nurses for Ward Nursing and Nursing Invalids at their residence.

G. A. CROSS, Secretary-Superintendent.

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M. PETERSON & CO.
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75 ST. ANNE STREET, LIVERPOOL.

FOR HOME, FOREIGN, & COLONIAL MARKETS

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WESTMINSTER COLLEGE, TRINITY SQUARE, BORO', LONDON, S.E.

EXAMINATION IN LONDON.

Week ending December 11, 1891.

MAJOR EXAMINATION.

24 Candidates were examined, 13 failed, the following
11 passed:—

From the Westminster
College—
Bertules, P.
Matthew, E.
Naylor, J.
Woodcock, H. H. A.

From all other schools—
Morgan, W. E.
Holt, H. C.
Melhuish, A. R.
Sturton, F.
Smith, R. S.
Softley, A. E.
Willeher, C. G.

Only one student failed.

12 candidates failed.

MINOR EXAMINATION.

42 candidates were examined, 27 failed, the following
15 passed.

From the Westminster
College—
Anness, J. L.
Carpenter, J. E.
Chettle, H. T.
Davies, J.
Eldred, C. W.
Evans, E.
Frost, J. E.

From all other schools—
Blackie, R.
Boucher, J. M.
Briggs, S.
Cobb, H. E.
Cooper, L.
Duckering, R.
Gilding, M.
Golland, J. H.

Total, 7.

Total, 8.

The following students of the Westminster College have
since passed:—Messrs. Andrews, Marris, Merritt, Keall,
Parker, Peck, Routley, Trafford, and Toohig.

WILLS & WOOTTON.

TOWNSEND'S HIGH-CLASS ALMANACKS FOR 1892.

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Having received a large
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disappointment intending
purchasers should please
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Largest and Best Equipped Pharmaceutical School in the Metropolis.

Under the direction of Mr. MAURICE WILLIAMS,

Assisted by Mr. T. A. ELLWOOD, A.I.C., F.C.S., M.P.S., &c.; Mr. MARTIN J. COLE, Microscopist;
Mr. J. M. HOWELL, B.Sc. (Honours), Tutor.

Since the Pharmaceutical Department was opened, it has met with far greater success than the most sanguine of the Proprietors expected. There will be nothing wanting on the part of the management to further the work and keep up the reputation of the School. Our policy is to do all we can for the gentlemen who place themselves in our charge, by employing the best of teachers and by making the Laboratories, &c., spacious and well equipped, so that the knowledge they seek can be acquired with comfort and without impairing health—an important factor when reading for an examination.

The Professors are always in attendance (not during lecture hour only), and Students are invited to seek their aid whenever in difficulty. The Proprietors have realised the fact that Pharmaceutical Students should be treated as gentlemen preparing for an honourable profession, hence—using the words of a critic—their lavish expenditure in making this Pharmaceutical School perfect in all its appointments. Photographic Drawings are always deceiving, therefore Students are invited, before they enter elsewhere, to make it their business to inspect the arrangements at the City School.

The Laboratories are fitted with all modern improvements, Electric Light, Gas, and constant Water Supply to every Bench. All requirements, Books excepted, provided for Pupils, both in the Chemical Laboratory and in the Dispensary. The arrangements for the Dispensing Classes are so complete that it is a rare occurrence for a City School man to fail at the Examination.

In addition to all these advantages, the Fees at the City School are about 25 per cent. lower than at other schools.

The next Course will commence on Tuesday, January 5, 1892.

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PURSE ALMANACKS.

Specimens and Prices Now Ready.

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THE MAGIC LANTERN: ITS CONSTRUCTION AND USE. Contains complete Instructions. Cloth covers, PRICE 6d.

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Each Magic Lantern is efficient for Exhibitions. The Lens gives crisp definition, being a superior Achromatic, Photographic Combination (large diameter back lens), with rack and pinion. It is fitted to a telescopic lengthening tube, so gaining increased focal accommodation. The Condenser is composed of two plano-convex lenses of four inches diameter. The refulgent lamp has three wicks (or four wicks 2s. extra), yielding brilliantly illuminated picture. Each is complete in box.



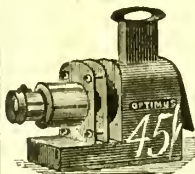
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30/.

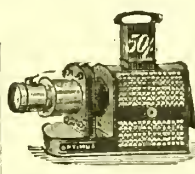


Student's Lantern (to take demonstrating tank) finished Brass Sliding Tubes. 40/.

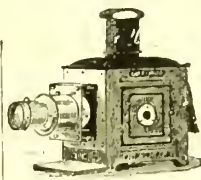
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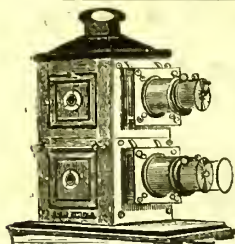
Russian Iron Body, Brass Sliding Tubes. 45/.



Perforated Russian Iron Body, Brass Sliding Tubes. 50/.



2 Panelled outside Body, Stages, & Doors, Brass Mahogany Sliding Tubes 52/.



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The Top Lantern may be used separately with Oil Lamp.

Seasoned Mahogany Body, 4 Panelled Doors, and Moulded Foot, picked out with black, Achromatic Photographic Front Lenses, Compound Condensers, all Brass Stages £8 8

"OPTIMUS" TRIPLE FOR LIMELIGHT.

Seasoned Mahogany Body, 6 Panelled Doors, Moulded Foot, picked out with black, Brass Stages and Tubes, Achromatic Front Lenses, Compound Condensers £14 10

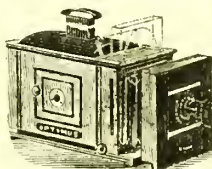
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Patent Quick-acting Rack Adjustment.

This Apparatus comprises superior Mahogany Body Lantern and Long Bellows Camera adjusted by Rack and Pinion. The Lantern is fitted with powerful Refulgent Lamp, with 3 wicks, giving brilliant illumination. Compound Condensers.

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	s. d.	If with Russian Iron Body instead of Mahogany Body.	s. d.
5-in., no front lens	100 0	5-in., no lens	75 0
5-in., with "	127 0	5-in., and "	102 6
6-in., no "	133 0	6-in., no "	87 6
6-in., with "	151 0	6-in., and "	115 3
7-in., no "	155 0	7-in., no "	110 0
7-in., with "	173 6	7-in., and "	137 9
8-in., "	256 0	8-in., no "	160 0
9-in., "	290 0	9-in., and "	250 0
10-in., "	360 0	10-in., no "	285 0
12-in., "	580 0	12-in., and "	450 0



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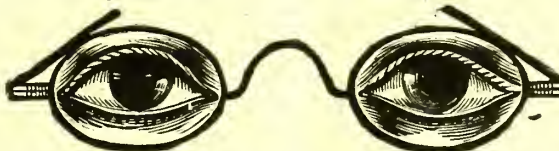
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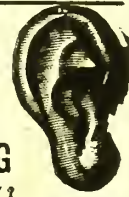
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All other Thermometers have a contraction in the stem an inch above the bulb, and a chamber within which retains a part of the mercury. This is a defect, as it is a difficult matter to heat the mercury properly in this chamber, as it is so far away from the bulb and mouth.

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Result—a truer temperature is taken, and in half the time; the scale is much more open and easy to read, as the divisions and figures are so much nearer the bulb.

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NOW READY,
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**THE
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The
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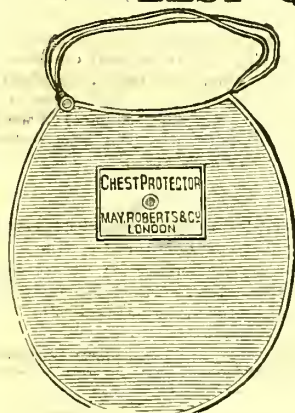
Another Season's trade is approaching. Already there are indications of a rigorous winter. The mornings are raw and cold, evenings chilly, and winds biting. None know so well as Chemists and Druggists the intimate relation between the barometer and health. Bad weather means various things; some of them we give quotations for on this page, with this brief hint: We are in the best position in the world for supplying the best goods, at the best prices, and on the best terms. We employ no Travellers, and give our Customers the advantage of the saving in expenses.

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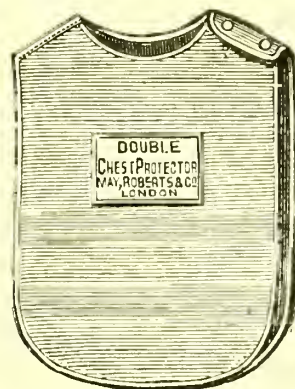
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SINGLE.

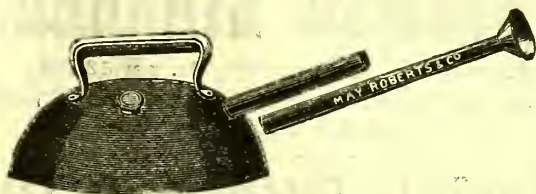
Nos.	0	1	2	3	4
Size—	8½ × 7½	9½ × 8½	10½ × 9½	11½ × 10½	12½ × 11½
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In small and frequent doses it is an efficient *diuretic*, but as an *aperient* it should be taken *before breakfast*, in doses of from 1 to 2 teaspoonfuls, dissolved in water, preferably warm. To increase the *aperient* action of the Natural Carlsbad Mineral Water, a teaspoonful of the Salt, previously dissolved in a little hot water, should be added.

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Claims these advantages in comparison with others of that class, viz:—

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BRATBY & HINCHLIFFE LTD
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All our Seltzogenes are manufactured on the well-known "Fevre" System, and each one is thoroughly tested before leaving the works.



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1	2	3	4	5	8 pint.
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NON-INTOXICATING BEER

Made from MASON'S Original

EXTRACT of HERBS

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Composed of Yarrow, Dandelion, Comfrey, & Horehound.
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A Sixpenny Bottle makes EIGHT GALLONS of

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Ginger, Orange, Lemon, Raspberry, Black Currant, &c.

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LARGE BOTTLES of SODA,
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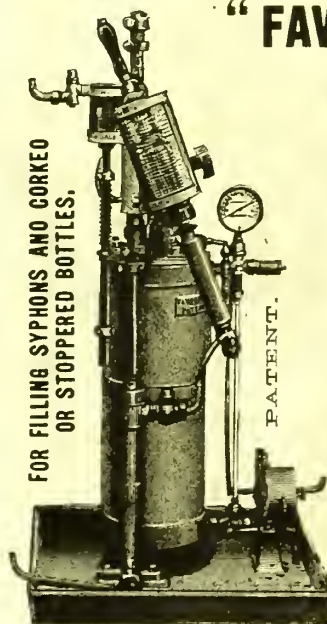
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A Complete Machine, by which one man is capable of making about 25 dozen bottles of Pure Aerated Waters per hour AT LESS THAN ONE SHILLING PER GROSS.

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Is the only **PURE**
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Price 10d. per lb. Write for Sample.

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GOLD
AWARDED AT THE INTERNATIONAL
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MEDAL
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Oxford Street,
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(Established 1808.)

Messrs. HASSALL & CO.

Gentlemen,—

Kindly forward
another 18-Gallon
Cask of Phospho-
Citric Acid. We con-
gratulate you on your
recent improvement,
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were sent to one of the
first Hospitals in the West
End made from yours and
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chosen as the purest and best.
We have now discarded Citric,
and you are at liberty to make
use of this if you think proper.

Yours faithfully,
THOMAS MAYO & CO.

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TO AERATED WATER MANUFACTURERS

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ARE GUARANTEED TO BE THE FINEST IN THE MARKET

ESSENCES OF GINGER, LEMON, ORANGE &c.

HOP ALE AND GINGER ALE ESSENCES.

Besides GOLD & SILVER Medals, these Essences have obtained the HIGHEST TESTIMONIALS from all the Medical Journals & from the Principal Trade Journals in this & other Countries.

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PRICE LISTS FREE ON APPLICATION.

PURE CANE CASTOR SUGAR.

Guaranteed FREE from BEET, also ULTRAMARINE, and all other IMPURITIES.

It is specially suitable—and has no equal—for the manufacture of MEDICATED SYRUPS and AERATED WATERS, on account of its great purity and easy solubility.

MEDICATED and AERATED WATER SYRUPS of the required strength can be made of this sugar with Cold Distilled Water, requiring neither Heat nor Filtration, and yielding clear and bright solutions.

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CANE SUGAR	=	99'889
FRUIT SUGAR	=	0'021
MOISTURE	=	0'090
ASH	=	0'000

Extract from Report on this and other of our Sugars:—

"We never met before with specimens of Sugar so pure. Their purity is extraordinary."

By Messrs. R. R. TATLOCK & READMAN, analysts, Edinburgh and Glasgow. November, 1888.

CANE SUGAR	=	99'887
FRUIT SUGAR	=	0'069
MOISTURE	=	0'044
ASH	=	0'000

Extract from Report:—"This sugar is so pure, that it is difficult to believe it to be a regular article of commerce."

Mr. FALCONER KING, Analyst to the City of Edinburgh, says in his remarks, October, 1888:—

"Speaking practically, these sugars contain no impurities at all, and consist of PURE CANE SUGAR."

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Works—EARLESTOWN, LANCASHIRE.

THE VERY LATEST!!! THE FILTER FOR THE MILLION

THE MOST COMPACT, THE MOST EFFECTIVE, AND **THE** **BEST** EVER INTRODUCED.
CAN BE FITTED ON THE WATER TAP BY A CHILD.
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A. BOSTOCK HILL, M.D., D.P.H. CAMB., F.I.C.

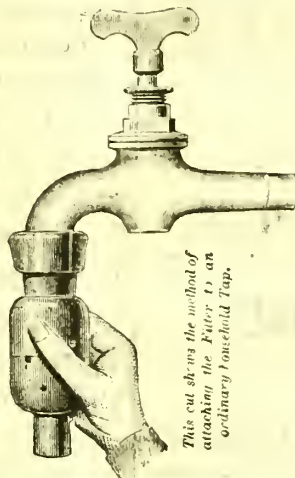
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Messrs. Tippetts Limited, Birmingham.

Gentlemen,—I beg to report that I have carefully tested the Tap Filter received from you on the 11th inst., and find it to be most efficient in its working. It performs thoroughly all that can be expected from any Tap Filter—viz., the removing from the water of animal and vegetable suspended matter, so that the water even when delivered turbid, can be made clear, bright, and much better fitted for drinking purposes.

It is simple in construction, and by reversing it it can be cleansed at once. Its simplicity and efficiency are such that I have much pleasure in testifying to its good qualities.

Signed, A. BOSTOCK HILL, M.D., F.I.C.,
Professor of Toxicology and Lecturer in Public Health, Queen's College, Birmingham, Public Analyst to the County of Warwick, &c., &c.



THE ANALYTICAL LABORATORY,
9 Broad Street Corner, Birmingham.

September 15th, 1891.

Dear Sir,—I have made a series of careful experiments with your Patent Filtering Apparatus, and find that it fulfils its purpose admirably. It thoroughly separates suspended matters, and renders the drinking-water clear and bright and frees it from all insoluble contaminations, animal debris, and fungoid growths. It is a simple, cheap, and useful Filter, and should find its way into every house where pure water for drinking is required.

I am,

Yours faithfully,

FRANK H. ALCOCK, F.I.C., F.C.S.,
Bell Scholar, Pereira Medallist, and Silver Medallist of the Pharmaceutical Society.

To cleanse the Filter simply unscrew from the mouthpiece and reverse daily. To prove the value of this invention, examine the first glass of water taken from the back of the Filter after one day's use.

PRICE, ONE SHILLING AND NINEPENCE EACH.

Wholesale only TIPPETTS LIMITED, Prince's Chambers, Corporation Street, Birmingham.

GLASS BOTTLES.

THE NEW SHAPE FLATS, WITH ROUNDED EDGES, BEST QUALITY—
3 & 4 OZ. ... 7s. 9d. per Gross.
6 & 8 OZ. ... 8s. 9d. "

THE ORDINARY SHAPE—

& 4 OZ. ... 7s. 6d. per Gross.
& 8 OZ. ... 8s. 6d. "

ALL OTHER SIZES EQUALLY LOW.
A SAMPLE BOTTLE FREE ON APPLICATION.

The "NATIONAL FEEDERS" ready (First-class Bottles) 2s. 6d. per doz.

The "RELIANCE" Medicine-dropper, per doz.; each one in a separate box

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St. George's, Middle St.

NORWICH,

December, 1887.

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Yours obediently,

COLEMAN & CO., LIMITED.

N.B.—The Wine is sold in Bottles, 2/9 and 4/6 each.
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[1]

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GOOD
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GOOD
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FIG. A.

FIG. B.

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VASE.

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Composed of Liebig's Extract of Beef, Extract of Malt,
and sound Port Wine.

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WILLIAM ELBORNE, F.C.S., F.L.S.

Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).
December 15, 1888.

Introduced 1855]

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[Introduced 1855.

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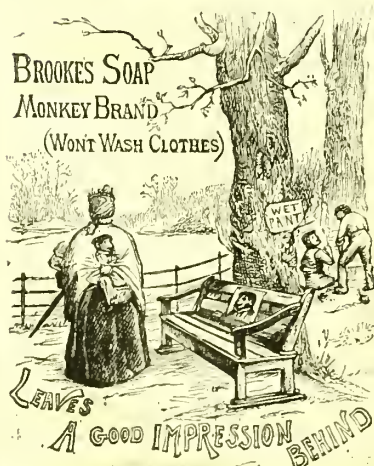


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During December we shall be receiving our first arrivals of Seville Oranges and Messina Lemons, when we shall be in a position to supply the *specialty* machine-cut Peels which have given such general satisfaction to the trade since their introduction. The *Fresh Peels* are cut *free from pith*, in small shreds (about 1" x 1/4"), a condition acknowledged to be the most favourable for the manufacture of Official Tinctures and Infusions and of Soluble Essences.

The *Dried Peels* are cut as free from pith as possible, and every care taken in drying to preserve the colour and aroma.

Samples (as soon as ready) will be sent free on application.

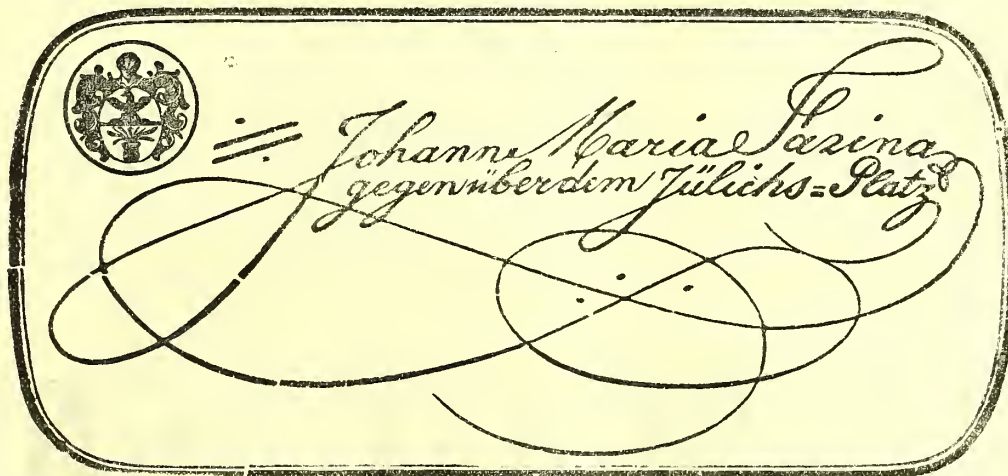
CHARLES SOUTHWELL & CO., DOCKHEAD, S.E.

EAU DE COLOGNE

OF THE MOST ANCIENT DISTILLER,

JOHANN MARIA FARINA,
Opposite the Julichs Place, COLOGNE,
ESTABLISHED A.D. 1709.

PRIZE MEDALS:—LONDON, 1861 AND 1862; OPORTO, 1865; PARIS, 1867; VIENNA, 1875.

By appointment, Sole Purveyor to Her Most Gracious
Majesty Victoria, Queen of Great Britain & Ireland;
Their Royal Highnesses the Prince and Princess of
Wales; Albert II., King of Saxony;Their Majesties, William II., German Emperor and
King of Prussia; Alexander II., Emperor of Russia;
Francis Joseph, Emperor of Austria; Lewis, King
of Portugal.In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, I
beg to submit my Price Current.At the same time I beg to call special attention to the following facsimile of my Trade Mark for the
protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been
decided in my favour.All similar Labels being more or less imitations of the same, I shall proceed as before against all person
selling or exposing for sale any such imitations.I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there
has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.Orders equal to at least 12 dozen short bottles will be promptly executed at 13s. 6d. per dozen, against my
bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam,
Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra.
7½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some
London House, or permission to draw on same at three months.The Goods can also be shipped in transit through London at a very small additional expense, full particulars
of which may be obtained of my Sole Agents for Great Britain and Ireland:—**MESSRS. J. & R. McCracken,**
No. 38 Queen Street, Cannon Street, London, E.O.

The following are the sizes of my bottles:—

No. 1. Long Green Flasks	—	—	—	—	—	12 bottles	} to one dozen.
" 2. Short White Bottles	—	—	—	—	—	12	
" 3. Double ditto	—	—	—	—	—	6	
" 4. Wickered Bottles (small)	—	—	—	—	—	8	
" 5. ditto (medium)	—	—	—	—	—	4	
" 6. ditto (large)	—	—	—	—	—	2	

JOHANN MARIA FARINA

COLOGNE: January, 1891.

OPPOSITE THE JULICH'S PLACE.

SUPERFATTED MEDICINAL SOAPS

PREPARED FROM PRESCRIPTIONS AND UNDER THE CONSTANT CONTROL OF

Dr. MED. J. EICHHOFF, Senior Physician to the Wards for Skin and Venereal Diseases of the Elberfeld Hospital.

FIRST SERIES.

SUPERFATTED RESORCINE SALICYLIC SOAP.

In Parasitic Eczema, Seborrhoea Capitis.

SUPERFATTED RESORCINE SALICYLIC SULPHUR SOAP.

In Parasitic Eczema, Acne Vulgaris, Acne Rosacea.

SUPERFATTED RESORCINE SALICYLIC SULPHUR TAR SOAP.

In Psoriasis Vulgaris.

SUPERFATTED QUININE SOAP.

In mild cases of Mycosis especially Pityriasis Versicolor.

SUPERFATTED IODOFORM SOAP.

For Chronic Ulcers, Venereal Boils, &c., and also in the Massage Treatment of Small Tumours and Exudations.

SUPERFATTED HYDROXYLAMINE SOAP.

In Lupus, Psoriasis, Tinea, Fossurans and Parasitic Sycois.

SUPERFATTED CREOLINE SOAP.

In Scabies, Impetigo Contagiosa, L. tertrigo, Lupus.

SUPERFATTED ERGOTINE SOAP.

In Rosacea, Angiectasis, mild cases of Varix, and in the Massage Treatment of Migraine.

SUPERFATTED IODINE SOAP (READILY SOLUBLE).

For Small Tumours, Indolent Ulcers, Lupus, Parasitic Eczema, Sycois and Mycosis.

SUPERFATTED SALICYLIC CREOSOTE SOAP.

For Lupus.

SECOND SERIES.

SUPERFATTED MENTHOL SOAP.

In General and Local Pruritus (especially Genital and Anal).

SUPERFATTED SALOL SOAP.

In Parasitic Eczema, Psoriasis, Eczema, Marginatum and Mycosis.

(C. f. "Dermatologische Studien," Second Series, Vol. I. for 1889, and also "Volkmann'sche Sammlung Klinischer Vorträge," New Series, Vol. IV. 1890.)

Sole Manufacturer:—FERD. MULHENS, No. 4711, Glockengasse, Cologne-on-Rhine.

Under the constant supervision of Mr. J. BRASCHOSSE, of Cologne, Pharmaceutical Chemist.

Agents for the United Kingdom—KROHN BROTHERS & CO., BILLITER BUILDINGS, BILLITER STREET, LONDON, E.C.

SUPERFATTED ARISTOL SOAP.

In Psoriasis, Ulcus Cruris, Dermatomycois, Syphilitic Gunimate, Ulcerating Lupus.

SUPERFATTED SULPHUR CAMPHOR, PERUVIAN BALSAM SOAP.

In Acne Vulgaris and Seborrhoea of the Body or Face.

SUPERFATTED SALICYLIC ICHTHYOL SOAP.

In Acne Vulgaris, Acne Rosacea and Eczema, also in the Massage Treatment of cases of Articular and Muscular Rheumatism.

SUPERFATTED THYMOL SOAP.

Recommended as a Pure Hygienic Soap for daily use, especially for children.

SUPERFATTED RESORCINE SOAP.

Seborrhoea, Parasitic Eczema and Erysipelas.

SUPERFATTED ICHTHYOL TAR SOAP.

Dermatomycois, Psoriasis, Chronic Palmar and Planter Eczema.

SUPERFATTED MENTHOL EUCALYPTOL SOAP.

Urticaria, Prurigo, also in the Massage Treatment of Mieralre, as well as a disinfecting soap for medical men, patients and their attendants (in infectious cases).

SUPERFATTED SALICYLIC SOAP.

SUPERFATTED SALICYLIC SULPHUR SOAP.

SUPERFATTED SALICYLIC SULPHUR TAR SOAP.

For the same cases as in the three first-mentioned soaps.

SUPERFATTED SUBLIMATE SOAP, $\frac{1}{2}$ AND 1 %.

As Disinfecting Soap.

SUPERFATTED BENZOIC SOAP.

A Sanitary Toilet Soap for Intertrigo, Eczema, &c.

SUPERFATTED PINE-NEEDLE EXTRACT SOAP.

In Massage Treatment of Rheumatic Affections and Parasitic Skin Diseases, also as a Disinfecting Soap for medical men, patients and attendants.

SUPERFATTED THIOL SOAP, 5 % AND 10 %.

In Parasitic Eczema, Mycosis, Acne Vulgaris, Acne Rosacea.

SECOND TO NONE IS THE GENUINE

EAU DE COLOGNE

MANUFACTURED BY

JOHANN MARIA FARINA, GEGENÜBER DEM "FRIESENPLATZ,"

COLOGNE-ON-THE-RHINE.

Sold by all the leading Wholesale Houses throughout the World. For Retail: Wallrafplatz 10
Corner Domkloster opposite to the Cathedral in Cologne.

E. C. Z. A.

THE NEW SKIN SOAP,

MADE ONLY BY

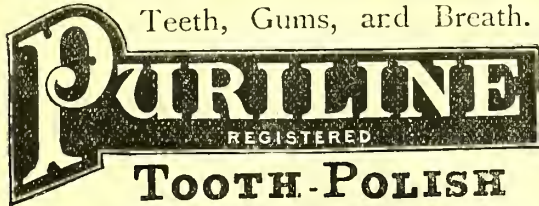
BAYLEY & CO., 17 COCKSPUR ST., LONDON,

THE SOLE AND ORIGINAL MANUFACTURERS OF

"ESS. BOUQUET" PERFUME and of the Celebrated "SPERMACEI SOAP TABLET."

GOLD MEDAL JAMAICA EXHIBITION.

A PURE AND PERFECT ARTICLE FOR
Teeth, Gums, and Breath.



Will purify and beautify the Teeth with a pearly whiteness; polish the enamel; prevent tartar; destroy all living germs, and keep the mouth in a delicious condition of comfort, health, purity, and fragrance. Non gritty, and absolutely pure and harmless to use. Price One Shilling, in handsome Enamel Box.

The **POPULAR DENTIFRICE**, which Sells at Sight,
Handsomely put up in Show-cases, as here shown. Printed
in Twelve Colours. An ornament to any window.
Price 7/6 per dozen, of all Wholesale Houses



The **COURT CIRCULAR** says:—"Puriline" emanates from the laboratory of 'Bunter's Nervine' fame. Bunter's previous preparations for the teeth have received such high encomiums from medical men that it is not surprising that this latest production should have received the recognition and approval of those best qualified to pronounce on its merits."

H. M. STANLEY, D.C.L., LL.D., the great African explorer, says:—"I use 'Puriline Tooth Polish and Wash'; am much pleased with both."

The Countess of ROSSLYN writes:—"Have been recommended to use your Dentifrice, called 'Puriline.' It is extremely nice; please send me six more."

Show-cards and Handbills supplied by

A. WILSON, 422 Clapham Road, LONDON, S.W.
Proprietor of "Bunter's Nervine," "Dentine,"
and "Puriline."

This old-established and celebrated preparation for the Teeth attractively put up in the form of Liquid, Powder, and Paste, is now being largely advertised to the public.



THE GENUINE
EAU DE BOTOT
IS THE ONLY DENTIFRICE APPROVED
By the Academy of Medicine of Paris.

	Size	Size	Size
EAU de BOTOT	1/6, 11/9;	2/6, 20/;	5/32/6 doz
POWDER	1/6,	8/6;	2/6, 17/ doz.
PASTE	1/6,	8/6;	2/6, 17/ "

Of all Wholesale Houses.

SAMPLE BOXES,
Containing
Powder, Paste, & Liquid
per 8/- doz.

N.B.—See each Article
has the Signature—

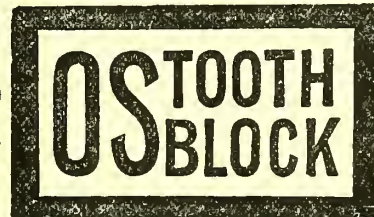
M. Botot



O.S. TOOTH BLOCK

REGISTERED

(No. 15569.)



TRADE MARK

Class 43.

BEST AND SAFEST DENTIFRICE.

Be particular to observe that the Registered Trade Mark and the name "OSCAR SUTTON & CO." are stamped on all that are genuine, as worthless imitations are in the market.

Wholesale: Of all the Leading Houses, and of

OSCAR SUTTON & CO., PRESTON, LANCASHIRE.

PURE OTTO OF ROSE,
SPECIALITY OF
SHIPKOFF & CO.
DISTILLERS AND EXPORTERS,
KIZANLIK, BULGARIA.

Agent for Great Britain—G. P. BAKER, 19 Ivy Lane,
LONDON, E.C.

THE OTTO OF ROSE which this house distills and exports is known above all by the absolute purity of its quality and the unexcelled sweetness and strength of its odour. It is guaranteed to be the finest essence produced in the famous Rose Valley of Bulgaria.

Shipkoff's Brand received the only award for Otto of Rose at the Paris Exhibition.

NOTICE!!

THE FIRM of MARIA CLEMENTINE MARTIN,

NUN

Have been Awarded PRIZE MEDALS for their Celebrated

EAU DE COLOGNE

AT THE FOLLOWING EXHIBITIONS, VIZ.—

LONDON, 1851. RHENISH PROVINCES, 1852. NEW YORK, 1853.

PARIS, 1855.

LONDON, 1862.

VIENNA, 1873.

SYDNEY, 1879.

MELBOURNE, 1880.

Facsimiles of Prize Medals Awarded at London Exhibitions, 1851 & 1862 appear on Label of each Bottle. Without such, None are Genuine.

BEWARE OF IMITATIONS!!

EAU DE COLOGNE of the “**NUN**” (so-called), manufactured by any firm other than the above, is spurious, and an infringement of registered proprietary rights.

PRICE LIST.

	Duty Paid, Net.	In Bond.		Duty Paid, Net.	In Bond.
No. 1.—Half Shorts.....	8/6	...	5/6	No. 4.—Long Green Flasks.....	16/- ... 11/-
No. 2.—Shorts	16/-	...	11/-	No. 5.—Wickered Bottles (Small)...	26/6 ... 19/3
No. 3.—Shorts (finely Wickered) ...	21/3	...	16/6	No. 6.—Wickered Bottles (Medium)	53/- ... 38/6
No. 7.—Wickered Bottles (Large).....	106/-	duty paid, net;	77/- in bond.		

Small Cases assorted to order (of not less than £3 value in bond) delivered free freight, less 7½ per cent. discount.

All Sizes can be obtained through any Wholesale House, or direct from the Sole Agents for Great Britain and Ireland,

C. E. MASON & CO.,

2 BEECH STREET, LONDON, E.C.

CLAXTON'S PATENT EAR CAP.



BEWARE OF WORTHLESS IMITATIONS.

It is an acknowledged fact that many otherwise beautiful children are disfigured by their prominent ears. By wearing the above Cap, which keeps the ears close to the head instead of crumpled forwards, this serious blemish is remedied. It also keeps the hair tidy at night, and is no irritation to the most sensitive child.

IN ALL SIZES.

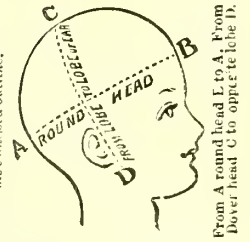
SEND POSTAL ORDER, 3/6.

A. CLAXTON, 62 STRAND, W.C.

Wholesale Agents—S. MAW, SON & THOMPSON, Aldersgate St., London, E.C.

£100 REWARD upon conviction of anyone infringing this, the only patent ear cap over 5,000 sold in four months.

Directions for Measuring Head required in ordering, are found on the enclosed outline.

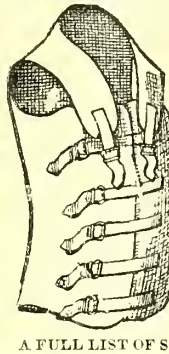
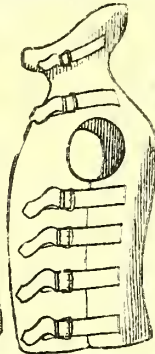
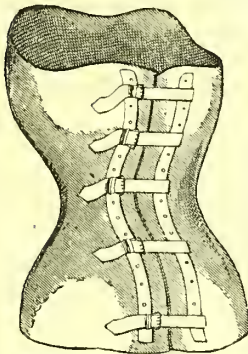


COCKING'S ADAPTABLE PORO-PLASTIC JACKETS AND SPLINTS.

Patentee and Sole Manufacturer, J. T. COCKING, PLYMOUTH.

Jacket.

Cervical Jacket No. 1. Cervical Jacket, No. 2.



JACKET
(In cases of slight deformity)

INSTRUCTIONS
FOR MEASUREMENT.

Circumference at axilla.

" waist.

" hips.

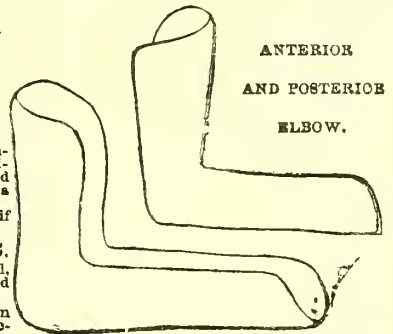
Length from axilla to great trochanter.

In severe angular cases circumference over apex of curve, position of ditto, and contour should be given; in lateral cases a description of the case.

In all cases it must be stated if for male or female.

CERVICAL JACKETS.
Same measurements required, and circumference at neck, and length from neck to axilla.

Any part of the Jacket can in the process of manufacture be left soft.



ANTERIOR
AND POSTERIOR
ELBOW.

A FULL LIST OF SPLINTS AND PORO-PLASTIC IN SHEETS MAY BE HAD ON APPLICATION.

Telegrams—
"LINT LIVERPOOL."

THE
LIVERPOOL PATENT LINT CO.,
MARK ST. MILLS,
NETHERFIELD ROAD NORTH,
LIVERPOOL.



LINT. MANUFACTURERS OF
FLAX, & COTTON,
LINTS,
ABSORBENT, AND CARDED
COTTON WOOLS,
ABSORBENT, OPEN WHITE, and GREY
BANDAGES,
SURGEON'S, AND CARBOLIZED
TOW.

PURE PARA RUBBER BANDAGES.



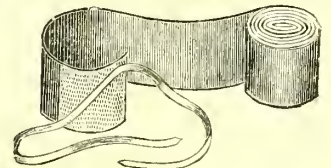
GAUGE.	5 Feet.	7 1/2 Feet.	10 Feet.	15 Feet.	21 Feet.
20 { 2 1/2 in. ...	2/3	3/4	4/2	6/9	8/3 each.
3 " ...	2/3	3/6	4/10	6/9	9/6 "
22 { 2 1/2 " ...	1/7	2/5	3/6	4/9	6/9 "
3 " ...	1/11	2/11	4/	5/9	7/9 "
25 { 2 1/2 " ...	1/2	1/11	2/6	3/6	6/2 "
3 " ...	1/6	2/4	3/2	4/2	6/6 "

Perforated, 3/ dozen extra.

POROUS BANDAGES.

GAUGE.	5 Feet.	7 1/2 Feet.	10 Feet.	15 Feet.	21 Feet.
2 1/2 in. ...	1/10	2/10	4/	5/3	7/3 each.
3 " ...	2/3	3/4	4/6	6/6	8/10 "

Subject to 10 % and 5 % monthly a/c.



Special Discounts for
Large Quantities.

F. SCHUTZE & CO., 36a ALDERSGATE ST., LONDON, E.C.

Telegraphic Address—"ODORATORS LONDON."



We beg to call your special attention to the Articles on this List, and feel sure that for equal quality the Prices cannot be beaten.

TERMS—NET CASH, MONTHLY ACCOUNT.

New Accounts must be accompanied by Remittance or London Reference.

PRICES SUBJECT TO ALTERATION WITHOUT ADVICE.

HEAD-QUARTERS FOR MENTHOL CONES.—Prices and particulars on application.

BRONCHITIS KETTLES.

3-Pint	..	..	..	..	..	1/6	each
5-Pint	..	..	..	..	..	1/11	..

CAMPBOR ROLLS.

Beautifully white and will not become rancid. Labels bear no name, only Brand "The Acme."

1/2 size, 1/2 gross in glass top box	..	..	..	..	5/6	gross.
2d. " 1/2 " " " " " " "	..	..	..	..	11/-	..

COD LIVER OIL.

Finest Non-freezing Norwegian.

Elegantly engraved Latel, 6 dozen with buyer's own name.

4 oz. bottles, Imperial	..	..	2/6	..	2/9	per dozen
8 " " "	..	..	4/6	..	5/-	"
6 " " "	..	..	8/-	..	8/6	"
2 " " "	..	..	13/-	..	14/6	"

CHEST PROTECTORS.

BEST QUALITY FELT, FULL SIZE.

Red or White Felt.	1	2	3	4	5
Single	..	5/6	7/6	9/6	11/6
Double	..	12/-	16/-	2/-	26/-

Flannel-lined Chamois Skin.	..	..	..	..	..
Single	..	6/-	9/6	11/9	16/-
Double	..	13/6	17/6	23/9	34/6

Pine Wool.	..	..	..	..	..
Single	..	5/6	8/-	11/-	13/6
.. lined Chamois	..	6/6	10/-	12/-	16/-

Double	..	12/6	16/6	22/-	27/-
.. lined Chamois	..	17/-	24/-	32/-	37/-

Pure Natural Undyed Wool.	..	..	..	..	..
Single	..	5/9	8/3	10/-	12/-
Double	..	12/9	16/6	22/-	28/-

THE ACME INHALER.

The most elegant small Inhaler made 12/- per dozen.

GLYCERINE JELLY.

WHITE, RED, AND AMBER.

1 oz., Nickel screw capped bottles	..	..	..	2/-	per dozen.
2 oz., " " " " " "	..	..	..	3/3	"
4 oz., " " " " " "	..	..	..	6/-	"

HOT WATER BOTTLES.

Best India Rubber, Nickel-plated Screws, Drab.

Size	..	..	10x6	10x8	12x8	12x10
Each	..	..	2/11	3/9	4/7	5/2
Plush covers	..	..	10d.	11d.	11d.	1/1
Size	..	..	14x8	14x10	16x10	16x12
Each	..	..	5/-	6/-	6/7	7/9
Plush covers	..	..	1/2	1/2	1/4	1/6

RESPIRATORS.

No. 702/c. Cork Respirators	..	..	..	5/6	per dozen
702. Perforated Silver Plated	..	..	..	7/-	"
703. Silver Plated Gauze, two thicknesses	..	..	..	10/9	"
704. Double Plated Gauze and perforated plate above	..	..	..	16/-	"
705. Ditto, Ditto, below	..	..	..	16/-	"
706. Gold Plated Gauze and perforated plate above	..	..	..	23/-	"
707. Ditto, Ditto, below	..	..	..	23/-	"

All Nos. except 702.c each in glass top box.

TABELLÆ.

COMPRESSED TABLETS. Detailed List on application.

Pot. Chlor., in flat fancy boxes, 40 Tablets in each	..	..	1/6	per dozen.
" " and Borax, in round ditto, ditto	..	..	2/3	"

Tablets also supplied in bulk.

The majority of cheap Tablets contain only 30 in each box.

THE BRONCHIAL INHALER.

(REGISTERED.)

A perfect Inhaler, equal to Nelson's	..	..	..	8/6	per dozen.
The best and most effective small Inhaler made.	..	..	..	..	..

If you have not seen our New Illustrated List, YOU MUST! Write for Copy AT ONCE.

HOCKIN, WILSON & CO.,

Wholesale Druggists, Druggists' Sundriesmen, and Surgical Instrument Makers and Dealers,

13 to 16 NEW INN YARD, 186A TOTTENHAM COURT ROAD, LONDON, W.

And at MANCHESTER.

FULL LIST OF SUNDRIES, &c., ON APPLICATION.

A HAPPY CHRISTMAS!

It is all very well wishing one a "Happy Christmas," but, with the rain coming down all the day long, and the streets full of water, slush, and, worse than all, melted snow that penetrates through the best of shoes, it seems almost a satire; as who can possibly be happy with a cold in the head or influenza? neither of which can be avoided under these circumstances except by wearing

DR. MONROE'S ELECTRIC SOLES,

Which keep the feet cosy and warm, and cause by their peculiar action a most exhilarating glow to pervade the whole system. Chemists, therefore, are urged, if they want an agreeable Christmas, to wear these soles themselves and also to persuade their clients to do the same. They can now be obtained from all Wholesale Houses, both at home and abroad. Should there be any difficulty in obtaining a supply, 1 dozen pairs, packed in a handsome Counter Case, will be forwarded post free on receipt of postal order for **4/-**, by

Messrs. AYRTON & SAUNDERS,
149 DUKE STREET, LIVERPOOL.

As a matter of fact, the postage absorbs all A. & S. profit; but, in almost every instance where these Soles are once stocked, a large sale is created and repeat orders are frequent.

CAPSULED "McK. & R." PILLS.

McKesson & Robbins : Originated 1870 : New York.

WHY SHOULD THE "McK. & R." PILLS BE PRESCRIBED?

1. Because they are prepared from materials of the highest quality only.
2. Because they are made according to the B.P. or other Standard Authorities, and therefore all the combinations are well tried and of recognised value.
3. Because they are taken pleasantly—being tasteless—and readily, being ovoid in form.
4. Because they are not subjected at any stage of preparation to the injurious action of heat.
5. Because the coating of *pure transparent gelatine* preserves the contents from oxidation.
6. Because they are always soluble, and the contents soft and quickly disintegrated.

LIST OF PRINCIPAL CAPSULED PILLS.

Aloes, all the B.P. combinations 5 gr.		Laxative, Vegetable—	
Aloes, Dilute (Dr. Hall Dinner Pill) 4 gr.		Res. Podoph.	
Aloes Barb.		Ext. Hyoscy.	
Saponis Pulv.		Ext. Tarax. aa 1-4 gr.	
Aloes and Nux Vomica—		Ext. Coloc. Co. 1 gr.	
Aloes Soc. 1½ gr.		Jalape	
Aloin 1 gr.		Res. Leptand. aa 1-2 gr.	
Aloin, various combinations.		Ol. Ment. Pip.	
Anti-Dyspepsia (Fothergill)—		Mercury, Biniodide 1-16 gr.	
Strychnine ½ gr.		Mercury, Proto-iodide 1-20, 1-16, 1-8, 1-4 gr.	
Pulv. Piper Nig. 1½ gr.		N.B.—Made from the absolutely pure <i>yellow</i> impalpable powder, free from mercury and from biniodide.	
Arsenious Acid 1-20, 1-50 gr.		So-called "green" proto-iodide contains uncombined mercury.	
Asafoetida, U.S. and B.P. 5 gr.		Mercury with Chalk 1 gr.	
Atropine 1-100, 1-300 gr.		Morphine Mesiate 1-8, 1-4 gr.	
Blue Pill, B.P. 1, 2, 3, 5 gr.		Nitro-Glycerine 1-200, 1-100, 1-50 gr.	
Blue Pill, with Colocynth and Hyoscyam. 5 gr.		Opium 1 gr.	
Calcium Sulphide 1-10, 1-4, 1-2, 1 gr.		Opium and Camphor 1 gr.	
Calomel, Colocyn., and Hyosc. 5 gr.		Opil Pulv. 1 gr.	
Calomel Co., B.P. 5 gr.		Camphor 2 gr.	
Camphor and Hyoscyam. 2 gr.		Pepsin, Pure 1 gr.	
Camphor.		Phosphorus 1-100, 1-50, 1-30 gr.	
Cannabis Indica 1-4, 1-2 gr.		N.B.—In no kind of Pill are the advantages of the "McK. & R." method better exemplified or more in request. No other brand of Phosphorus Pills is equally reliable for the administration of the unoxidised medicament.	
Cascara Sagrada 3 gr.		Phosphorus and Iron—	
Cathartic Comp., U.S.P.		Phosphor. Pur. 1-50 gr.	
Ext. Jalap. 1 gr.		Phosphorus, Iron, and Quinine—	
Ext. Coloc. Co. 1-1-3 gr.		Phosphor. Pur. 1-100 gr.	
N.B.—The ready solubility of the "McK. & R." Pills is readily proved by taking a dose of these.		Quinine Sulph. 1 gr.	
Colocynth Comp., B.P. 4, 5 gr.		Phosphorus and Rux Vomica—	
Colocynth, other combinations.		Phosphor. Pur. 1-50 gr.	
Copaiba Compound—		Phosphorus and Quinine—	
Cubebe Pulv. 2 gr.		Phosphor. Pur. 1-50 gr.	
Ferri Sulph. Exsic. 1-2 gr.		Phosphorus and Valerianate of Zinc—	
Corrosive Sublimate 1-30, 1-20, 1-10 gr.		Phosphor. Pur. 1-50 gr.	
Croton Oil 1-2 gr.		Picrotoxin 1-30 gr.	
Duretic—		Podophyllin 1-8, 1-4, 1-2 gr.	
Ext. Buchu, Potass. Nitrat. 1 gr.		Quinine, Bisulphate 1-4, 1-2, 1, 2, 3, 4, 5 gr.	
Scilla Pulv. 1-2 gr.		Quinine, Sulphate 1-4, 1-2, 1, 2, 3, 4, 5 gr.	
Emmenagogue—		Quinine Co. (Anti-Malarial).	
Ferr. Sulph. Exsic. 1-1-2 gr.		Largely prescribed in America with excellent results.	
Thus. Americau 1-1-2 gr.		Rhubarb Comp., B.P. 5 gr.	
Aloes Socot. 1-2 gr.		Rhubarb with Blue Pill 5 gr.	
Ergotin 3 gr.		Salicylic Acid 2, 5 gr.	
N.B.—Each Pill = 30 gr. ergot or 30 ms. d. extract. This form is more reliable and uniform in effect and more agreeable than the liquid preparations.		Soap Comp., B.P. 5 gr.	
Eucalymin 2, 3 gr.		Squill Comp., B.P. 5 gr.	
Iodoform and Iodoform with Iron 1 gr.		Strophanthus 1-20, 1-4 gr.	
Ipecac. 1-4, 5 gr.		Strychnine 1-50 gr.	
Ipecac. Co. 5 gr.		Tonic Laxative (Fothergill)—	
Ipecac. and Squill, B.P. 5 gr.		Quinine Sulph. 2-3 gr.	
Iron Pill, B.P. Add. 3, 5 gr.		Strychn. 1-30 gr.	
Iron Arseniate 1-8 gr.		Ext. Bellad. aa 1-4 gr.	
Iron reduced by Hydrogen (Quevenne) 1, 4 gr.		Valerianates, Iron, Quinine, and Zinc.	
Iron and Quinine Citrate 2 gr.		Warburg's Tincture and the same without Aloes.	
		Each Pill = 1 fl. dr. of the Tincture.	
		Zinc Phosphide 1-4, 1-2 gr.	
		Zinc Valerianate 1 gr.	

Special Combinations of 3,000 or more Pills made and Capsuled to order for Hospitals, &c., at Special Quotations.

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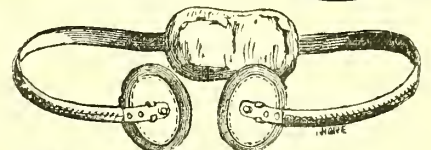
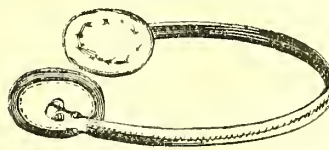
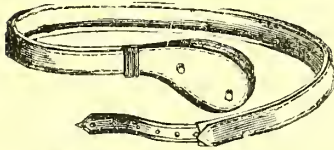
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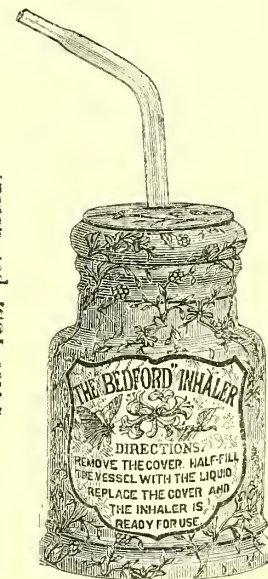
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A Fellow of the Chemical Society writes:—
 "The 'Bedford Inhaler' is the handiest and cheapest little instrument of the kind yet introduced. Simple tubular and Sponge Inhalers without steam will not always yield the medicated vapours. The 'Bedford' is the best pattern of Steam Inhaler (not Spray). The sketch does not show an important part of the instrument, which is a perpendicular air channel at the back."

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CONTAINS THE ESSENTIAL ELEMENTS of the Animal Organisation—Potash and Lime;

THE OXIDISING AGENTS—Iron and Manganese;

THE TONICS—Quinine and Strychnine;

AND THE VITALISING CONSTITUENT—Phosphorus: the whole combined in the form of a Syrup with a **SLIGHTLY ALKALINE REACTION**.

IT DIFFERS IN ITS EFFECTS FROM ALL ANALOGOUS PREPARATIONS, and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

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ITS CURATIVE POWER is largely attributable to its stimulant, tonic, and nutritive properties, by means of which the energy of the system is recruited.

ITS ACTION IS PROMPT; it stimulates the appetite and the digestion, it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy; *hence the preparation is of great value in the treatment of mental and nervous affections.* From the fact also that it exerts a double tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE—CAUTION.

The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, **FINDS THAT NO TWO OF THEM ARE IDENTICAL**, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, **IN THE PROPERTY OF RETAINING THE STRYCHNINE IN SOLUTION**, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. FELLOWS."

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles (4/- or 7/-); the distinguishing marks which the bottles (and the wrappers surrounding them) bear can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

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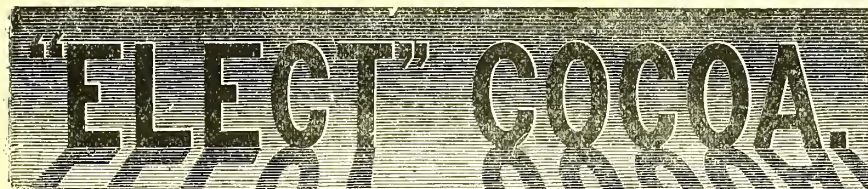
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PRODUCES NEITHER HEADACHE, SICKNESS, NOR CONSTIPATION
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Although many new hypnotics and analgesics have been recently introduced, NEPENTHE still holds its position as THE hypnotic and sedative of excellence. "Nepenthe" is registered under the Trade Marks Act, and is our sole property. No other preparation should be substituted when Nepenthe is ordered in a prescription.

Sent out in bottles bearing a label in white letters upon a green ground. We prepare also Double Strength Nepenthe, and Glycerole of Nepenthe (4 times the single strength) for hypodermic injection.

PRICES AND TERMS ON APPLICATION.

FERRIS & CO., WHOLESALE AND EXPORT DRUGGISTS. BRISTOL.

THE JUJUBE & PASTILLE SEASON

The object of this announcement is to remind Chemists that our products in this department are worthy of notice. It is gratifying to us as manufacturers to receive from time to time *unsolicited* testimony to the quality of our Jujubes and Pastilles. What can be more conclusive than this?—

OR *"Please send three or four more tins of Glycerine Jujubes, as last; I like them very much;"*
"They stand the test of time well;"

expressions of opinion of very recent date, and which were sent to us quite spontaneously. We manufacture full lines, the undermentioned being, perhaps, the most in demand:—

Delectable Pastilles

Glycerine ,, (Hard)
 Glycerine ,, (Soft)
 Glycerine and Black Currant Pastilles
 Glycerine and Paregoric Pastilles ^(Patent 17213)
 Voice Pastilles

Mixed Fruit Pastilles

Glycerine and Honey Pastilles
 Delectable Jujubes
 Voice ,,
 Licorice ,,
 Glycerine ,,

The flavours are good, colours bright, and the finish first-class.

We particularly call attention to our Glycerine and Paregoric Pastilles (Patent 17213), which are having a large sale all over the Kingdom. On receipt of *13s. 4d.* we shall be glad to send a Box suitable for Counter display to Chemists, in whatever part of the country, free. This will be a good opportunity for having enclosed small Sample Orders—say 1-lb. tins of the various Jujubes and Pastilles mentioned above.

In addition to the above, we do an extensive business in Medicated Lozenges, Sugar, Pearl, and Gelatine Coated Pills, all Effervescing Medicated Preparations, Extract of Malt plain and combined with Cod-Liver Oil, and Boiled Sweets of special quality for Chemists, Price Lists of which will be sent upon application.

BLYTON, ASTLEY & CO.

MANUFACTURING PHARMACISTS,

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FRIENDLY TALKS with the TRADE

The intense competition in the retail part of the pharmacist's business excites a corresponding amount of interest in making sales of any necessities to his customers. Some try teas; others paints, oils, &c.; while they overlook the fact that they might make more profit, and maintain a higher tone in their business, by keeping prominently before the notice of the medical men and the public products more nearly appertaining to the healing art. It is our intention this week to give a few details of articles readily saleable when kept well to the fore.

THE KEPLER SOLUTION OF COD-LIVER OIL.



Cod-liver Oil is considered to be of the first importance when nutrition is defective or slow. The plain oil cannot be taken by many people on account of its tendency to produce nausea and vomiting. This trouble has been obviated by the introduction of the Kepler Solution of Cod-liver Oil in Extract of Malt. Undoubtedly a very large proportion of the Cod-liver Oil swallowed plain is wasted, as proved recently by the experiments of Minkowski upon the absorption of fat. Cod-liver Oil taken plain is invariably found to a large extent in the feces, but when administered in a finely-divided condition is perfectly assimilated by the patient. The Kepler Solution is *palatable, and easily digested*, consisting of Pure Extract of Malt and the finest Norwegian Cod-liver Oil only.

Supplied in $\frac{1}{2}$ -lb. and 1 $\frac{1}{2}$ -lb. bottles at 20s. and 86s. per doz.

DRY INHALERS.

The Pinol Eucalyptia Dry Inhaler, consisting of a small glass tube filled with an absorbent medium, upon which the volatile medicament is poured, is extensively employed in the treatment of bronchial and pulmonary affections. The patient inhales from the mouthpiece of the instrument, and as the air is drawn through the medium it becomes saturated with the volatile inhalant. By this method the medicament passes into the air-cells of the lungs, and to a large extent is absorbed, thus producing a general therapeutic effect. The Menthol Pocket Inhaler (B. W. & Co.) is intended for the same purpose. This elegant little instrument can be hermetically closed by means of an electro-plated cap, fitting on to the cylinder. The patient is thus enabled to use the inhaler at any time of the day without unusual precautions. The Menthol Oro-Nasal Inhaler, designed by Dr. Macnaughton Jones, is also extensively employed for the treatment of catarrhal conditions of the naso-pharynx. The Inhaler is fitted with two small nasal pieces, which are inserted into the nostrils, thus occluding the ordinary air, and enabling the patient to inhale that saturated with the Inhalant. A bottle of Menthol solution and a camel-hair brush are also supplied in the tiny pocket-case containing the Inhaler. The Pinol-Eucalyptia Dry Inhalers are supplied at 14s. per doz.; the Menthol Pocket Inhalers at 12s. per doz.; the Menthol Oro-nasal Inhalers at 36s. per doz.



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The Wholesale Houses can now supply

ONE-PENNY TINS.

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BLUE SEAL SOAP,

1-LB. TINS.

And all our other Preparations, excepting 5-lb. Tins.

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NEW YEAR PRESENTS FOR MEDICAL MEN.

We hear that our Medical Diaries and Hypodermic and other pocket cases of Tabloids have been very highly appreciated by Medical Men who received them last year or the year before as Christmas or New Year presents.

These articles are better this year than ever before, and we will be willing to send any of them on approval to any Chemist or Physician in the United Kingdom who may think he would like to see them with a view of presentation at Christmas or New Year to medical friends.

The handsomest and most useful diary is that for enclosure in the leather wallet. It is covered with silk. The wallets are very elegant and useful for holding cards and papers. Price of silk-covered diary, 2s. 6d.; with wallet to go outside of this, in morocco, 4s.; with velvet pile leather wallet, which is very soft and fine, or in Russian leather wallet, the price is 5s. The diary in ordinary morocco, with durable tuck, 2s. 6d.

Any Chemists who do not wish to give any diaries away will find them **ready selling articles** if they will order a supply and show them to the neighbouring Physicians.

The Hypodermic pocket cases, complete with twelve tubes of Tabloids, are listed at 15s. In ALUMINIUM, 20s. each. Other pocket cases are of many styles and prices.

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Writing becomes a pleasure when this Ink is used. It has been adopted by the principal Banks, Public Offices, and Railway Companies throughout Ireland.

It writes almost instantly full black.

Does not corrode Steel Pens.

Dries rapidly on the Paper.

Is cleanly to use, and not liable to blot.

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[writing.

Blotting-paper may be applied at the moment of

In Jars, 6d., 1s., and 2s. each.

Can be obtained, in London, through Messrs. Barclay & Sons, Farringdon Street; W. Edwards & Son, 157 Queen Victoria Street, E.C.; F. Newbery & Son, Newgate Street; S. Maw, Son & Thompson, Aldersgate Street; Hayden & Co., 10 Warwick Square, Paternoster Row; Hovenden & Sons, City Road; Ayrton & Saunders, Duke Street, Liverpool; Goodall, Backhouse & Co., Leeds Jno. Heywood, John Dalton Street, Manchester; James Hemington, 6 Moor Street, Birmingham; Henry Hodder, Broad Street, Bristol

BEWLEY & DRAPER (Limited), DUBLIN.

See "CHEMIST AND DRUGGIST," December 15th, 1874.

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For Infants, Children, and Invalids.

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HIGHEST AWARD—ADELAIDE, 1887, and MELBOURNE, 1888.

The *Lancet* describes it as "Mr. Benger's admirable preparation."

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The *British Medical Journal* says: "Benger's Food has by its excellence established a reputation of its own."

The *Illustrated Medical News* says: "Infants do remarkably well on it. There is certainly a great future before it."

Benger's Food is sold in Tins at 1/6, 2/6, 5/, & 10/, by Chemists, &c., Everywhere.

Wholesale of all Wholesale Houses.



ESTABLISHED 1858

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Supplied only to persons connected with the Trade.

Post free to every country in the world. Single copies 4d. each.

Cheques or Postal Orders should be payable to EDWARD HALSE, and crossed MARTIN'S BANK (LIMITED).

For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

Supplied regularly to every member of the following Societies, who have adopted THE CHEMIST AND DRUGGIST as their official organ.

The Pharmaceutical Association of New Zealand.

The Pharmaceutical Society of Queensland.

The Pharmaceutical Society of South Australia.

Tasmanian Pharmaceutical Society.

Otago Pharmaceutical Association.

South African Pharmaceutical Association.

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SUMMARY.

THE Contents column must do duty for a Summary column this week. The usual space is otherwise engaged. From the "Contents" it will be gathered that the present number is largely made up of specially-contributed articles—things which our subscribers may read without fear of their attributing to THE CHEMIST AND DRUGGIST that gastric disturbance which becomes so prevalent at this season.

We review the events of the year, and give reports of meetings held in Edinburgh and Liverpool, at which some useful papers were read. It will be seen from our News columns that the sale of poisonous patent medicines is under consideration by the Treasury. We give particulars of a number of recent wills, including that of Mr. T. H. Hills.

READ THIS, PLEASE.

THIS week we complete the thirty-ninth volume of THE CHEMIST AND DRUGGIST. During the year we have provided 1,864 pages of literary matter, all of which is of direct concern to one or other section of the trade for which we write. This quantity is exclusive of the DIARY, which is also included in the return for a ten shilling subscription. We should also mention the advertisements, which are certainly not the least valuable part of THE CHEMIST AND DRUGGIST. The wholesale trade gives us generous support, for which we tender our best thanks. We are confident that the results to them amply justify the expenditure, but their enterprise is none the less to be recognised. We have the satisfaction this week of publishing 100 pages of advertisements and of knowing that our journal is always in the ascendant in reputation and circulation.

OUR WINTER ISSUE

will be published on January 30, 1892, and as soon as Christmas is over we hope to receive communications from advertisers as to space in that popular issue, or in regard to circulars to be stitched up with it. This is the best way to start a successful year.

THE DIARY COUPON.

We are offering Eight Guineas in prizes to be distributed among competitors who return the coupon, one of which has been sent out in every copy of the DIARY for 1892 which has been circulated. So far these coupons are coming in slowly. We remind subscribers in the United Kingdom that we must receive theirs in order to admit them to the contest by New Year's Day. We hope to get an abundant response

"SCIENTIFIC MYSTERIES."

This has proved an excellent hook for chemists' counters. "They are selling freely," write those who have taken the books up. And not only do the books sell at a profit themselves; they establish a business in chemicals and apparatus, which is likely to be permanent. Chemists can obtain these books in dozen parcels (a show-card in each parcel) at 8s. 6d. per dozen from any of the following firms:—

Ayrton & Saunders, Liverpool	Moss, J., & Co., London
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Clay, Dod & Co., Liverpool	Pinkerton, Gibson & Co., Edinburgh
Duncan, Flockhart & Co., Edinburgh	Potter & Clarke, London
Edwards, Wm., & Son, London	Raines, Clark & Co., Edinburgh
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Ismay, John, & Sons, Newcastle	Wright, Layman & Umney, London
Lloyd, T. H., & Co., Leicester	Wyleys (Limited), Coventry
Maw, S., Son & Thompson, London	
May, Roberts & Co., London	

We will supply a parcel of handbills, with the seller's name attached, to any chemist who has stocked these books and who will send us 3d. towards the cost of carriage.

BOOKS FOR THE CHEMISTS' LIBRARY.

"Art of Dispensing," 3s. 6d. (post free, 3s. 10d.).

Alpe's "Handy-book of Medicine-stamp Duty," 2s. 6d. (post free, 2s. 9d.).

Proctor's "Manual of Pharmaceutical Testing," 2s. 6d. (post free, 2s. 9d.).

"Veterinary Counter Practice," 3s. 6d. (post free, 3s. 9d.). These can be obtained at the published prices from any of the firms named above or from 42 Cannon Street, E.C.

English News.

A NEW SULPHUR SPRING AT HARROGATE.—A valuable new sulphur spring has been discovered at Harrogate through the instrumentality of Alderman Simpson, one of the oldest members of the local governing body. This mineral spring is an old and valuable one, which has been brought to light after being buried for upwards of fifty years. This is the fourth spring recently brought to light by Alderman Simpson, and it is anticipated that the discovery will be of great value to Harrogate. The spring is sulphurous, and an analysis will be made of its constituents.

CHARGE AGAINST A DISPENSER.—At the Liverpool Assizes, December 19, William Utting, dispenser, surrendered to his bail on an indictment charging him with having committed a grave offence on a child. Mr. Shee, for the defence, emphatically denied the charges in the indictment, and called evidence in support of his contention. Before the conclusion of the evidence called for the defence the jury intimated that they had heard sufficient of the case, and they acquitted the prisoner. His Lordship intimated his approval of this course, and the prisoner was discharged.

CHEMISTRY SCHOLARSHIPS AT LIVERPOOL.—As the result of the competitive examination held on December 10 and two following days, the senate of the Liverpool University College has awarded the Sheridan Muspratt Scholarship to Mr. Arthur Walsh Titherley, and the Exhibition to Mr. Francis Ernest Francis. The competition was extremely close, and the second candidate was deemed worthy of the *proxime accessit* distinction. The scholarship is of the value of 50*l.* per annum, tenable for two years, the Exhibition being of the value of 25*l.*, and both are awarded on the knowledge of chemistry.

THE CHEMISTS' ASSISTANTS' ASSOCIATION.—On Thursday evening, December 17, the first half of the session of the Chemists' Assistants' Association, concluded with a smoking-concert under the direction of Mr. C. W. Seccombe. The Vice-President, Mr. J. C. Umney, accompanied the songs on the piano. The chair was taken by Mr. Owen Wallis, one of the founders and a Past President of the association. The affair was highly successful, as, indeed, have been all the meetings of the half-session, due in no small degree to the popularity of the President, Mr. W. Lloyd Williams.

SWEET SPIRITS OF NITRE.—The Wandsworth Board of Works, having brought an action against a chemist and druggist in respect of some sweet spirits of nitre which their inspector had bought under that name, brought an action under the Sale of Food and Drugs Act, alleging that it was not of B. P. strength. The wholesale house who supplied the spirit undertook the defence, and Mr. Glaisyer, of Birmingham, was engaged to conduct it. When the case came on in the Wandsworth Police court on December 16 an adjournment was asked for on behalf of the prosecution, and a few days later notice was given of abandonment of the summons.

AMBULANCE NOTES.—At the meeting of the Brighton Junior Association of Pharmacy, held on December 17, Mr. A. P. Nosworthy gave a lecture on this subject. Referring to the treatment of those apparently drowned, Mr. Nosworthy said that restorative measures should be resorted to in all cases of supposed drowning. A medical man had informed him of a case where life had been restored after a man had been in the water an hour. Some men engaged in rescue work saw the man in the water, but, thinking the body was lifeless, merely passed a rope round it and towed it ashore. A young medical man, however, as soon as the body was landed, commenced restorative measures, which eventually met with success. In cases of bad bites, the best plan was to get someone to suck the wound immediately after the bite was inflicted. It was not a nice thing to do, perhaps; but it should be borne in mind that the poison would not affect the person sucking the wound, and there was also the pleasure of saving a life. Having alluded to the plan of cauterising and bandaging, the lecturer added that, in the case of bites to travellers in the wilds, a little gunpowder was sometimes placed in the wound and then blown up.

POISONOUS PATENT MEDICINES.—Under the title of "Concealed Poisons," the *British Medical Journal* has the following:—"The Solicitor to the Treasury has under his consideration the circumstances brought under notice in the recent report of the Chairman of the Parliamentary Bills Committee of the British Medical Association on the subject of infringements of the law relating to the sale of poisons by the free sale of nostrums containing morphine and other poisons, without due labelling and by unauthorised persons. From communications which we have received, we have reason to believe that steps will be taken to act upon the facts so communicated, and to take steps for the repression of this widely-spreading abuse. The subject will also be brought before the next Council of the Pharmaceutical Society in virtue of a communication which Mr. Ernest Hart has addressed to the President of that Society, in accordance with the resolution adopted at the last meeting of the Parliamentary Bills Committee. We notice that at an inquest this week on a child, aged 5 months, before Dr. Danford Thomas, the coroner, it is reported, 'on production of some soothing-syrup bottles in connection with the evidence, took occasion to speak very strongly to the witness on the use of these medicines, which sometimes contained morphine and other narcotics.'"

IRISH NEWS.

MR. J. JOSEPH CALVERT, pharmaceutical chemist, has been appointed dispenser to the Lurgan poor-law district.

THE DERRY BOARD OF GUARDIANS have finally decided to appoint an apothecary for the local dispensaries at 50*l.* per annum.

MR. A. MONTGOMERY, the proprietor of Shannon's old established medical hall, Magherafelt, is about to emigrate to Australia.

TOSSING FOR AN APPOINTMENT.—At an election for a dispensary officer to the Kiltormer district on December 11, Drs. Quinlan (of Balinasloe) and McNamara (Corofin) each received an equal number of votes. They decided the contest by "heads or tails." Dr. Quinlan won the toss, and was thereupon elected.

AT THE EXAMINATION FOR REGISTERED DRUGGISTS, under Section VII. of the Pharmacy Act, 1890, held at Belfast on December 18 by Dr. McKinney, seven candidates answered to their names, and only one failed to satisfy the examiner. The following passed:—Mr. N. Kirkwood, Larne; Mrs. Annie McGanock, Glenarm; Mr. T. Moore, Belfast; Messrs. C. and J. E. O'Neill, Maghera; Mr. J. Wiley, Loughmourne. It is now just twelve months since the first examination under this section of the Act was held here, and Dr. McKinney (who is himself a pharmaceutical chemist, and, previous to his graduating as an M.D. of the Royal University, was proprietor of a high-class dispensing establishment) has given universal satisfaction. Much regret is felt that he is no longer to be an examiner.

LIBEL ACTION BY A PHARMACIST.—At the Court of Exchequer, Dublin, on Saturday December 12, Mr. John Isaac Bernard, pharmaceutical chemist, obtained a verdict against the *Freeman's Journal* (Limited) Publishing Company for libel contained in an issue of *Sport*—a newspaper published by the defendants—accusing plaintiff of falsehood in connection with an athletic contest. The libel referred to someone's "spiteful spewings," and said "the betting howl was a trumped-up charge." Mr. Bernard had reason to suppose the reference was to himself, and the Lord Chief Baron, in charging the jury, said the plaintiff had taken a moderate and unusual course in the letters he had addressed to the defendants in reference to the libel; but the persons in charge of the newspaper had not had the courtesy to reply. Even if a man wrongfully conceived himself to have been libelled, it was the duty of the publisher of the alleged libel to disclaim any intention to defame him. The plaintiff claimed 500*l.* damages, and the jury gave a verdict for 75*l.*

FIRING A PHARMACY.—On December 18, at the Ulster Winter Assizes, Charles W. Morgan, apothecary, was indicted for having, on July 22 last, set fire to his drug and pharmaceutical concern, Albert Bridge Road, Belfast, with intent

to defraud the insurance companies. Evidence was given that five outbreaks of fire were discovered to have occurred almost simultaneously; that the prisoner was alone in the place with two bailiffs who were in possession on account of a bill of sale for 40*l*., and that the stock, chattels, and fixtures were over-insured. One of the bailiffs deposed that on the day of the fire the prisoner told him that the debt would be paid next morning. Shortly before the discovery of the fire the accused went into the compounding-room, saying that he was going to mix medicine. A few minutes later he ran to the witness and said that the ether had overflowed and the shop was on fire. Further evidence was given as to the presence in the pharmacy of a number of "dummy" medicine-cases. The prisoner was found guilty and sentenced to three years' imprisonment.

SCOTCH NEWS.

FIRE AT AN EDINBURGH OIL-STORE.—A fire broke out in the stores of Messrs. T. Dickson & Son, oil, tallow, and candle manufacturers, lard importers and refiners, and dry-salters, Sempie Street, Edinburgh, on Friday morning of last week. The fire was originated by a workman, who, in contravention of the firm's regulations, entered a cellar with a light and drew some turpentine. The result of his action was that the spirit caught the flame, and the man and a lad had to beat a hasty retreat. Damage to the extent of 60*l*. was done before the flames were extinguished.

A PROFESSOR'S SALARY.—In the Edinburgh Sheriff Court, on December 18, T. Herbert Lewis, of 1 South Street, Chester, sued Professor Williams, of the New Veterinary College, Edinburgh, for 50*l*., being the balance of year's salary said to be due. Pursuer stated that he was engaged by defender as Professor of Anatomy and Materia Medica at a yearly salary of 200*l*., and that on June 8 he resigned, at which time only 150*l*. had been paid to him. Defender averred that pursuer was unfit to undertake his duties, and that at the time Lewis resigned no salary was due. The case was taken to *avizandum*.

DUNDEE CHEMISTS' ASSISTANTS' AND APPRENTICES ASSOCIATION.—On Friday evening last Mr. William Mair, dispenser to the Royal Infirmary, delivered his lecture on "Orchids," before the members of the association, it having been unavoidably postponed from Thursday evening. There was a large attendance, and Mr. C. Kerr, honorary president, occupied the chair. The wonderful structure of some of the more remarkable of the exotic orchidaceous flowers was described, and effectively illustrated with about fifty lantern slides, nearly all of which had been prepared by Mr. Mair. Some interesting details were given of the methods of collection in their native homes, and of the difficulties and dangers encountered by orchid-hunters. Some notes were also given on the principal British orchids, the lecture being intended as an incentive to botanical study. Among the exhibits were a number of orchid flowers, sent by some of the principal cultivators, and Dr. Paterson, Bridge of Allan. Mr. E. M. Holmes and Mr. J. Rutherford Hill lent specimens of salep from the museums of the Pharmaceutical Society in London and Edinburgh. A large number of coloured plates of orchid-flowers, also lent by Mr. Holmes, were much admired. From Mr. Samuel Lambert, drug broker, of 142 Fenchurch Street, London, the author also received a very fine specimen—an original bundle—of Bourbon vanilla beans. He had the privilege of showing it through the courtesy of Mr. A. C. Meyjes, F.R.G.S., of the editorial staff of *THE CHEMIST AND DRUGGIST*. The specimens and exhibits were examined with much interest. The working of the lime-light lantern, considering the somewhat limited dimensions of the room, was very satisfactory.

THE CORPSE DIFFICULTY.—At the Glasgow High Court, on Monday, John Daniel, the ex-employé of the City Parochial Board who some time ago was arrested on a charge of irregularly disposing of the corpses of paupers dying in the poorhouse, was placed on trial. Dr. Russell, Edinburgh, inspector under the Anatomy Act, stated in evidence that when a medical practitioner or medical professor required a body for dissection, that body must pass through the hands of the receiver appointed under the Act. The 9th section of the Act required that the body should

be accompanied by a certificate, signed by a surgeon or apothecary, or one who was with the person when he died. In cross-examination Dr. Russell was asked if the bodies were paid for. His reply was, "No; the money is only given to cover expenses." Sheriff Comrie-Thomson: Ah; but money does pass? Dr. Russell: Only the gratuities given to the joiner who makes the coffin, and to the coachman. Mr. Kennedy, the superintendent of the Glasgow Receiving House under the Anatomy Act, said the Receiving House was under the management of the Anatomical Institution, which consisted of the Lord Provost and magistrates of Glasgow, who paid him 120*l*. a year. The governor of the poorhouse was the proper person to apply to for bodies, but he sometimes took them from Daniel without seeing the governor. Daniel sometimes brought three or four bodies in the machine at once. Witness would pick out those suitable for the professors. He admitted he had himself sometimes filled up the medical certificates, and sent them on to Daniel to have them signed by the doctor. In other cases he had supplied him with blank forms. After the professors had done with a body he had to bury it, and send the burial certificate to the inspector under the Anatomy Act. He paid Daniel 5*s*. for each body. It was stated that many of the certificates presented by Daniel were forged. Ultimately the prisoner pleaded guilty to an alternative count in the indictment, charging him with delivering bodies to the receiver without the certificate required by the Act, and Lord Kyllachy passed sentence of fourteen days' imprisonment.

DECEMBER EXAMINATIONS.

THE Board of Examiners for England and Wales met at Galen Place, London, W.C., on December 10 and 11, and 16, 17, and 18. For the

MAJOR EXAMINATION

there were 24 candidates, of whom 13 failed. The following 11 passed:—

Bertulis, Prosper, London	Smith, Richard Sidney, Dartford
Holt, Herbert Collins, Bowdon	Softly, Alfred Ernest, London
Matthew, Edwin, Hadleigh	Surtout, Frederick, Peterborough
Melluish, Andrew Ralph, Windsor	Willsher, Charles Garrett, Dover
Morgan, William Ellis, London	Woodcock, Herbert Henry Addis, Margate
Naylor, John, Burley-in-Wharfedale	

MINOR EXAMINATION.

For this there were 134 candidates, of whom 82 failed, and the following 52 passed:—

Andrews, Walter, Winchester	Monger, George James, Folkestone
Anness, Joseph Leonard, Ipswich	Morris, Thomas James, Jersey
Blackie, Robert, Dufftown	Neale, Matthew Henry, Woolwich
Boucher, John Mycroft, Bristol	Olds, George, Farnborough Station
Briggs, Sam, Halifax	Parker, George Brook, Bradford
Carpenter, Joseph Edmund, Welford	Peck, Wm. Henry Wesley, Teignmouth
Chettle, Herbert Tovey, Trowbridge	Reynolds, Joseph, Treynon
Cobb, Herbert Ernest, Bury St. Edmunds	Rhodes, Thomas George, Keighley
Cooper, Lionel, Southsea	Ridge, Herbert William, Towcester
Davies, John, Torquay	Routly, Owen, London
Duckering, Richard, East Barkwith	Sage, Charles Edward, Frome
Eldred, Charles William, Shrewsbury	Sansom, Maurice, Barrow-in-Furness
Evans, Evan, Llanelly	Shepherd, James Henry, Leicester
Frost, John Ernest, Wortbing	Sowden, George, Spilsby
Gibson, Mary, London	Spafford, Henry John, Hull
Gilding, Matthew, Wainfleet	Toohiz, Albert William, Narberth
Golland, James Henry, Sheffield	Towers, William Londesborough, Barrow-on-Humber
Hall, Samuel William, Lichfield	Treadwell, Samuel Ernest Davis, West Dulwich
Hargreaves, Henry, Leeds	Tulley, Frederick Rudrum, London
Hawthorne, Archibald, Stafford	Walden, William Herbert, Reedham
Hull, John William, Tamworth	Watts, Joseph Wormali, Brighton
Keall, Allan Adolphus, Swansea	Williams, David Llewelyn, Colwyn Bay
Kennard, John, Denbigh	Williams, George Alfred Sbrewsbury
Marris, Frederick Lake, Grimsby	Wright, Frederick Charles, Birmingham
Marston, John Thomas, London	
Mercer, Alfred, Rochdale	
Merrett, Edward Lionel, Romsey	

Trade Notes.

"LILIPUTIAN GLASGOW" is the telegraphic address of the Anderston Apothecaries' Hall. Those who use the DIARY "Telegraphic Addresses," pages 165-7, will please make that entry.

MESSRS. HARRISON, PARKINSON & CO. have opened a branch establishment at 183 Manningham Lane, Bradford, at which Mr. F. R. Taylor, pharmaceutical chemist, will act as manager.

MESSRS. BOTWRIGHT & GREY, manufacturing opticians will have a representative in Australia, New Zealand, and Tasmania about the end of next February, with a complete set of their samples, &c.

MESSRS. HOLLOWAY have very naturally taken advantage of the testimonial given to their pills by the Master of the Rolls in an action in the Court of Appeal, recently reported in THE CHEMIST AND DRUGGIST. Counsel made an allusion to Holloway's pills in the course of the discussion which was not intended to be complimentary. "But they are very good pills," interposed the Master of the Rolls. Messrs. Holloway's tableau representing this historic delivery is worth referring to.

SPRATTS PATENT (LIMITED), Bermondsey, have produced a dog and poultry calendar, in which they give excellent representations of some of the most interesting breeds. There are six dog and six poultry varieties, and on the back of each sheet we find a quantity of useful information concerning the animals sketched. The drawings, we are told, are all by eminent British specialists, and the company offer to post copies of the first edition of the calendar gratis, so long as they have any, according to priority of application.

MESSRS. A. & M. ZIMMERMANN, Cross Street, St. Mary-at-Hill, E.C., are to publish, after Christmas, a little pamphlet on the new treatment of gout and rheumatism. "The object of this booklet is to acquaint the reader with the principal points in the modern literature of the treatment of gout and rheumatism. So far this information has been confined exclusively to medical publications, but is of common interest, and should be common knowledge." So says the preface. In the booklet itself we find a good, popular account of the diseases, and of the action of the remedies piperazine and phenocoll hydrochloride. The booklet contains, in addition, notes on chloralamid and other new remedies, with particulars of their properties and uses. It is somewhat novel to appeal direct to the ailing in regard to these matters; but it is not a bad idea. The price of "sixpence" is put upon the book, but the publishers tell us that they mean it for free distribution through chemists, who should apply for copies of it.

Personalities.

MR. RALPH L. CASSIE has sold his Romford business, and intends devoting his whole attention to his business at 49 Newgate Street.

MR. J. W. NOBES, M.P.S., R.D.S., of 235 East India Road, has taken the premises at 297 High Street, Poplar (many years occupied by Dr. Harvey) and will shortly open them as a new branch of the "Old Poplar Pharmacy."

Two former pupils in the School of Pharmacy of the Pharmaceutical Society—Edmund White and Charles Ernest Boucher (Bell scholars)—have taken the second and third places respectively in the London B.Sc. examination, first-class honours in chemistry.

MR. SEPTIMUS VAUGHAN MORGAN, one of the proprietors of this journal, is on a tour round the world. He is now in India, and may be addressed by firms or subscribers, until further notice, Poste Restante, Bombay. For full itinerary, see this Journal, October 3, 1891.

CANADIAN NOTES.

AN ENGLISH DRUGGIST AND THE LIQUOR LAW.—On August 1 last, Mr. H. Elborne, of King Street East, Toronto, sold, for alleged medicinal purposes, 6 oz. of whisky, registering the sale on a pad kept for that purpose. Subsequently two similar sales were made when Mr. Elborne found that his customer was a detective. In due course, Mr. Elborne found himself in court, charged with non-registration of the sales of liquor, and for each of the three offences a fine of twenty dollars and costs was imposed. Against this decision Mr. Elborne has appealed. The appeal came up on November 27, but judgment was reserved, Judge McMahon remarking that it might be advisable for Mr. Elborne to purchase a book for registering purposes.

INCOME-TAX.—In the Toronto Court held recently there were some cases of interest to the trade. The firm of Charles J. Hood, the manufacturers of the famed sarsaparilla, have a local factory here, and objected to the value of \$4,000 put on it. They thought \$1,200 enough. The headquarters of the firm are at Lowell, Mass. It transpired that the firm's agent was the originator of the \$4,000 figure, and the "bounce" has to be paid for. The assessor wanted Ernest Bellenger, a chewing-gum man, to pay on \$1,100, but he said that he only made \$480 a year. J. Bryce Mundie, a medical student who devotes his leisure time to the exercise of his vocal talent, appealed against an assessment of \$400 income. That, he said, he used in keeping himself at college. Both these gentlemen were excused.

CUTTING IN TORONTO.—A meeting of Toronto Druggists' Association was held at the College of Pharmacy on November 24, Mr. Hugh Miller in the chair. The members of the association were called together chiefly to discuss questions relative to the trade in patent medicines. A Yonge Street dry goods firm has lately taken to selling patent medicines at cost as a bait to the public, and a King Street druggist advertised to sell at similar rates. Some representatives of wholesale houses were present, and the retailers were assured that patent medicines would be sold only to retailers. There was a feeling that no attention should be paid to the Yonge Street dry goods firm, and that druggists should not reduce prices; but the meeting was adjourned to allow all in the trade to be canvassed. The adjourned meeting was held on November 27. The committee reported that the retail trade was almost a unit in the matter of maintaining prices. The signatures of 102 out of the 111 firms in business in the city had been attached to the basis of agreement, and only 5 refusals had been given. In view of this encouraging condition of affairs, it was decided to enter into negotiations with the wholesale trade, and also to circulate, for signature, in other parts of Canada, the basis of agreement referred to, and thus unite and consolidate the entire retail trade of the Dominion.

DEATHS.

GELDARD.—On December 12, at Barnstable, Richard Kelley Geldard, chemist and druggist, formerly of Plymouth.

ROBERTS.—On December 15, at Foregate Street, Chester, Mr. R. M. Roberts, chemist and druggist. Aged 40.

LITERAL ENGLISH.—A woman went into a Cass avenue drug store to have a prescription filled. The druggist compounded the drugs and as he handed the bottle to the customer, he said pleasantly:—"Here's your prescription, ma'am—shake!"—"I'll do nothing of the kind," snapped the woman, "and I think you've a good deal of impudence to ask me to."—"You don't understand," exclaimed the druggist. "I mean that when you take the prescription, you must shake."—"I won't take the prescription if it's going to make me shake," objected the customer.—"Good heavens, woman, it's the bottle you are to shake," shrieked the druggist.—"What good will it do me?" queried the woman.—"He means, madam," said the druggist's assistant, coming to the rescue, "that the mixture in the bottle should be well shaken before taken."—"Well, couldn't he have said so?" asked the wrathful customer as she looked a farewell suspicion at the unfortunate druggist.—*Detroit Free Press.*

Legal Report.

SAVORY & MOORE v. THE LONDON ELECTRIC SUPPLY CORPORATION (LIMITED).

ON December 18, before Mr. Justice Kekewich, in the Chancery Division of the High Court, Messrs. Savory & Moore, chemists and druggists, of 143 New Bond Street, sought an injunction to restrain the defendants, who have been using certain adjoining buildings as an electric-light distributing station, from so carrying on their business as to be a nuisance to the plaintiffs. At the rear of their shop in New Bond Street the plaintiffs have extensive premises, which are used as a laboratory and store for large quantities of chemicals and other valuable goods of an inflammable character, including spirit tinctures and other spirituous preparations. The defendants had previously used their adjacent buildings for the production of electricity, but owing, perhaps, to the plaintiffs' remonstrances, the defendants had removed the boilers, engines, and machinery, and had, without the plaintiffs' knowledge and sanction, proceeded to adapt and use their buildings and cellars as a converting and distributing station at which electric currents received from their generating station at Deptford at extra high pressure were transferred by intermediate or step-down transformers to moderate pressure, and then distributed to customers in the district. The plaintiffs complained that this use of the buildings was and must be attended with very great risk of fire, and was highly dangerous to their own premises. They further stated that already on two occasions fires had broken out on the defendants' premises, occasioning great risk to the plaintiffs' premises. The defendants denied that their business was attended with risk from fire or would be dangerous to the plaintiffs' premises, and stated that they had proposed to the plaintiffs to make certain precautions against accident. They also stated that they had obtained the approval of the Board of Trade to the supply of the electric current from their premises, and they insisted that the storage of highly inflammable and explosive materials in the plaintiffs' own premises created considerable danger to their own premises.

Mr. Justice Kekewich said it was beyond dispute that there was no imminent danger against which the plaintiffs were entitled to protection. But it was not so clear that, if the defendant's plans were perfected in their entirety, there would be no such danger, because defendant's plans were wanting in precision, and a disposition to be guided by circumstances and the exigencies of trade formed an awkward factor in the sum of possible results, into which, of course, inexperience and carelessness largely enter. The powers and therefore the dangers of electricity cannot be regarded as known, even by scientific men, with sufficient accuracy to justify a positive statement respecting possible results under hypothetical circumstances, especially when the locality is in the heart of a crowded city. In view of the fires which had occurred the plaintiff's alarm was natural and justifiable. His lordship commended the course which the plaintiffs had followed as prompt and prudent, and he held that the defendants had not given them such an undertaking as they were justified in claiming. The defendants had expressed certain intentions but had not given the necessary undertaking. He granted the injunction with costs.

BANKRUPTCY REPORTS.

Re SAMUEL JERVIS HARDING, High Street, Market Drayton, Chemist and Druggist.

AT Crewe Bankruptcy Court, on December 18, before Mr. Registrar Speakman, Samuel Jervis Harding, of High Street, Market Drayton, chemist and druggist, attended for his public examination. The gross liabilities were 4,474*l.* and the deficiency 2,359*l.*

The debtor stated that he commenced business at Audlem about seventeen years ago. He had no capital, but his uncle purchased for him a grocer's and chemist's business.

He stayed at Audlem about three years, and then sold the business for 500*l.* He acquired a larger business at Market Drayton, paying 1,300*l.* for it. His turnover was about 3,000*l.* a year, but he could not tell what profit he made. He did not balance his accounts. Twelve months ago he prepared a statement, which showed that his position was unfavourable, but he continued in the hope of recovering himself. He had lent considerable sums of money to his brother, who was a farmer. His brother owed him 500*l.* or 600*l.* Some time ago his brother made an arrangement with his creditors, and paid them 1*s.* in the pound. He (the bankrupt) did not prove for his debt, and never received any part of the composition.

The Official Receiver suggested that perhaps the money was recoverable.

The debtor stated that about six months ago, Messrs. Southall, to whom he owed about 360*l.*, sent over a representative to ascertain his stock. He told that gentleman that he had overdrawn at the bank to the extent of 170*l.* That, he admitted, was a falsehood; he had overdrawn his account by over 1,000*l.*

The examination was adjourned.

Re HENRY LAMPLOUGH, Holborn, London, Chemist and Druggist.

AT the Neath County Court, on Monday, December 14, an application was made on behalf of Mr. Henry Lamplough, described as owner of extensive property in London, Glyn Neath, and other places, to expunge or reduce the proof of Mr. Thomas Williams, and that an account be taken of what was due to Mr. Williams, and that in the taking of such account the bill of costs delivered to the bankrupt in October, 1891, might be taxed by the registrar of the Court. Further, that Mr. Williams might be charged with the proper value of No. 1 Sandown Terrace, Deal, which had been sold by him. No. 1 Sandown Terrace, which belonged to the bankrupt, was sold by Mr. Williams. A sum of 213*l.* 3*s.* 1*d.*, debited by Mr. Williams against the cash account, was also claimed, and 78*l.* 3*s.* 9*d.* in an action. It was stated that in December, 1889, Mr. Williams got a retainer for his firm, then called Williams and Whiteley, from the debtor, Mr. Lamplough, and almost immediately after this he seemed to have taken an assignment of some furniture for moneys advanced, and, as he said in his affidavit, an absolute conveyance of No. 1 Sandown Terrace, Deal, to his firm from the debtor. There were also other claims.

Mr. S. T. Evans, M.P., who appeared for Mr. Williams, said he thought that time would be opportune to take an objection to the jurisdiction of the Court. In going into what Mr. Leyson had called facts, there was a sworn and complete answer to them on the file. There was a proof of Mr. Thomas Williams on the file admitted for the sum of 1,200*l.*

Mr. Leyson (for the bankrupt): In the cash accounts these words occur:—"Received purchase-money of No. 1 Sandown Terrace, Deal, 1,250*l.*"

Mr. Evans submitted that this was a position which must be taken by the trustee or by a creditor, and only by a creditor in the event of dissatisfaction with the dealing of the matter by the trustee.

After a prolonged argument, his Honour said that it must be left to the trustee to decide whether either party was justified in coming to the Court. He dismissed the motion.

A second motion for the removal of Mr. Williams and Mr. William Jenkins from the committee of inspection under the bankruptcy was also discharged.

On application the costs were directed to be paid out of the estate.

Re THE NORTHWICH SALT COMPANY (LIMITED).

THE failure of this company was reported in our last week's issue, and on Monday last Mr. Wheeler, Assistant Receiver, presided at the first meeting of the creditors and shareholders.

Mr. Green and Mr. Wilson, directors of the company, gave information. The former said he knew absolutely nothing of the business transacted. He had been to the salt works once only, and his duties as a director were merely nominal.

He had been promised fifty shares in the company, but they were never allotted to him.

Mr. Wilson said he had been unable to obtain what information he wanted. For instance, he applied for a return of the amount of salt produced at the works, and although he repeatedly wrote to Mr. Clarke for it, the return was never sent. The failure of the company was due, in a great measure, to the action of the Northwich Local Board. When the company were sinking a second shaft, the Board obtained an injunction against them on the ground that the brook passing through the property, and from which the water for the town was obtained, was being polluted. That injunction, of course, put a stop to the business, and it would be a most expensive process to comply with the requirements of the Local Board.

Resolutions were passed appointing a committee of inspection.

Re LOUIS DAVID COHEN, lately trading in partnership with another as Lynch & Co., Druggists' Sundriesmen.

THE first meeting of the creditors under this failure was held at the London Bankruptcy Court on Wednesday. The receiving order was made on a creditor's petition on December 8, and the debtor not surrendering to the notice sent him by the Court, an order adjudicating him bankrupt was made two days later. The debtor was not in attendance and resolutions were passed to wind up the estate in bankruptcy, with Mr. F. J. Young (Turquand, Young & Co.) acting as trustee, assisted by a committee of inspection. No statement of affairs has yet been filed. The public examination is appointed for January 27, 1893.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within one month of the date of this journal give notice in duplicate, at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1890, of opposition to such registration." All communications to be addressed to H. Reader Lack, Esq., Comptroller General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

(From the "*Trade Marks Journal*," December 16, 1891.)

Sketch of Mr. Pickwick; for a fruit saline. By W. G. Dunn, trading as W. G. Dunn & Co., Fruit Salt Baking Powder Works, Croydon, Surrey. 153,613.

Letters "J. W. D." on circular design; for medicinal preparations. By J. Warner, 80 Normanton Road, Derby. 159,353.

"CRESCINE": for a preventive medicine for sea-sickness. By The Crescine Manufacturing Co., 6 Millbank Street, Westminster, S.W. 159,476.

RHEUMAZINE," and signature, on label: for medicated liniments or embrocations. By J. W. Holt, trading as J. W. Holt & Co., 33 Brookside, New Lane, Oswaldtwistle. 159,714.

"DAILY BREAD": for annatto, aerated beverages, cassia, essences, herbs, &c., &c. By Paul Pfeleiderer, 86 Upper Ground Street, Blackfriars, London. 157,910.

"BROLE": for soups for food. By J. R. Croft and H. H. G. Wells, trading as The Pure Beef Co., 5 Water Lane, Great Tower Street, London. 159,331.

"THE CASTLE WORKS, CARNARVON" and picture of castle; for mineral and aerated waters. By Thomas & Edwards, The Castle Works, Carnarvon. 159,330.

Picture of castle and garden; for mineral and aerated waters. By W. J. Macdonald, 31 Gordon Street, Huntley, Aberdeen. 159,397.

Geometrical design; for perfumery and toilet articles. By W. & C. Dunlop, Bradford. 158,774.

Gazette.

PARTNERSHIPS DISSOLVED.

Finney, J. T., & J. H. Heptonstall, Leeds, carrying on business as the Creosote Drug Company.

Footitt & Dye, Marlow, chemists, druggists, and tobacco dealers.

Scott, W., & J. E. Lee, under the style of the Wallsend Chemical Company, Wallsend, chemical and soap manufacturers.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDERS.

Delpach, Henry (trading as H. Delpach & Co.), Mimosa Street, F. lham, and Mincing Lane, City, merchant, broker, and agent.

Glover, Frank, Solihull, licensed victualler and veterinary surgeon.

Pocock, Walter, Brixton Hill, S.W., doctor of medicine.

ADJUDICATIONS.

Ramage, Alexander Sydney, late of Accrington, paint and colour manufacturer; afterwards of Walthamstow, commission agent; afterwards of Bootle, Sankey, near Warrington, and Hough Green, near Widnes, chemical manufacturer and research chemist; afterwards of Frodsham, Wolverhampton, and Halewood, near Liverpool, now of Wolverhampton, manager of chemical works.

Stockman, Tom Sargent, the younger (in the receiving order described as Tom S. Stockman), Walbrook, City, chemical agent.

ORDERS MADE ON APPLICATIONS FOR DISCHARGE.

Collins, William Bridge, the younger, East India Avenue, City, and Christchurch Road, Brixton, colonial merchant, trading in co-partnership with W. B. Collins, as W. B. Collins & Co.—discharge suspended for three years.

Grave, Lewis (trading as Lewis Grave & Co.), John Street West, Blackfriars Road, S.E., and Romford Road, E., paint manufacturer—discharge suspended for two years.

Kelsey, William, Barnsley, Yorkshire, dealer in drugs and patent medicines—discharge suspended for two months.

Scott, Samuel Swift, Mansfield, Nottinghamshire, chemist and druggist—discharge suspended for three years.

SELECTED POISONING CASES.

THOUGHT IT WAS WHISKY.

Benjamin Joseph Surtees, 32, an arsenal man, residing at Woolwich, had been on the drink, and had gone to bed. He got up, went to the cupboard, drank from a bottle containing chloride of zinc, and died. The coroner remarked on the folly of keeping poisons in medicine-bottles.

NOT A SCHEDULED POISON.

Annie Jane Andrews, aged 30, a cook in service at Hornsey, on Wednesday last week was found suffering from the poisonous effects of spirits of salt, and died the following morning. She bought the poison at Kelly's dispensary, Ferne Park Road. An inquest was held last Saturday, when it transpired that deceased had lost her sweetheart.

LAUDANUM CRAVING.

Seventeen years ago Emma James, wife of a forgerman at Sheffield, was attacked with bronchitis and inflammation of the lungs. She was advised by a medical gentleman to take a little laudanum to ease the pain. She did so until there was developed in her an inordinate craving for the drug. At the inquest, on Monday, the jury found that the woman died from bronchitis, accelerated by continuous drinking of laudanum.

HAD A TRUTHFUL APPEARANCE.

A servant-girl went to Mr. Edward Perry, chemist, Basingstoke, and asked for some strychnine for her uncle to kill some rats and mice which overran his place. Mr. Perry refused her that, but sold her a preparation of vermin-killer containing strychnine and arsenic, and wrapped up in a paper labelled "Poison," in red letters. Witness made the de-

ceased sign the hook. The girl appeared bright and cheerful, and had a truthful appearance, so that witness did not suspect anything wrong in the least. She took the poison, and died.

ARSENIC CAKES FOR SHIPS' USE.

John Chaney, a ship's watchman on board the *Alexander Elder* at Tilbury Docks, ate an arsenic cake supplied to the ship for killing vermin, and died in consequence. At the inquest Frederick Andrews, of Grays, vermin-killer, said he supplied arsenic cakes for destroying rats and mice. He always warned persons with whom he left these cakes of their poisonous nature, and on this particular occasion he gave them to the cook of the vessel, and told him to put them under lock and key. The jury considered that the arsenic cakes ought to be labelled "Poison," and the coroner pointed out to Andrews that he was liable to a penalty under the Arsenic Act, and called the attention of the police to the matter.

WANTED TO GO HOME.

Lily Cartwright was tried at the Staffordshire Assizes on a charge of attempting to poison her mistress. She had attained the mature age of 11, and was in domestic service. She made a cup of tea for her mistress, and added half a bottle of aconite liniment to it, which she found on the top shelf. The mistress did not take the tea. When asked why she did it, she said she wanted to go home. She was convicted, but the judge said he did not know what to do with so young a child. The mother said the girl would not have been in service if her husband had not been out of work twelve months. He was now in work again, and she was anxious to take the child home. His lordship said the child's father must be bound over to bring the prisoner up for judgment when called upon.

AN INQUISITIVE JURY.

Charles Adams, 74 years of age, landlord of a beerhouse at Osney, Oxford, was found dead in bed with a tumbler by his side containing a solution of cyanide of potassium, and near that a bottle containing sticks of the same poison, labelled "Poison" in three places and bearing the name of Phillip Harris & Co., Bull Ring, Birmingham. The old man dabbled in chemistry, in photography, and in engineering. He was generally "muddy" from drink. Some twenty-eight years ago his wife eloped with a clergyman; he eloped with another woman, who had lived with him until quite recently, when she had gone off, it was said, with a railway guard. The coroner was inclined to be satisfied with the evidence, but the jury, finding that the only way of proving that the man died from the poison, decided to have the body examined. The inquest was, therefore, adjourned.

TRAGIC SUICIDE.

The deaths of the man and his wife, Frederick and Martha Lewsey, aged 61 and 66 respectively, which we mentioned last week, have been inquired into. They were caretakers of the house and shop of Mr. John Cocks, chemist, 88 Chancery Lane, who resides at Wimbledon. Lately Lewsey and his wife had got so ill and infirm that Mr. Cocks thought of engaging fresh housekeepers, but he had not, he said, given them notice to quit his employment. They became depressed because, as they believed, they were about to lose their situations, and they grieved at losing money in an attempt to secure property to which Lewsey claimed a title. The man and his wife were found in bed, and both were dead. On a chair near the door there was a small blue bottle labelled "Hydrocyanic acid, diluted: Poison," and an empty wineglass. A letter was found in the room addressed to Mr. Cocks. It was as follows:—"You and your son have been the cause of this sad, rash act which we have committed, and the deed lies at your door through your tyrannical behaviour.—F. LEWSEY." Mr. Cocks said he paid the deceased 22s. per week, besides allowing them free quarters, and, with the exception of a short interval, they had been in his service twenty-five years. Owing to their age and infirmity he was afraid of a fire or other accident happening if he continued them in his service, but it was his intention to see to their welfare even after they left him; and he denied most emphatically that he had ever treated them otherwise than kindly and considerately. He was at

a loss to conceive how they had got rid of their money. The coroner suggested that they might have done so in law expenses. Ultimately the jury found "That both the deceased committed suicide while of unsound mind."

LIVERPOOL PHARMACEUTICAL STUDENTS' SOCIETY.

At the fortnightly meeting held on December 17, Mr. H. Wyatt, jun., in the chair, the first paper read was entitled

NOTES ON DISPENSING.

By H. R. Mitchell.

The author did not claim any originality for the notes, which were principally on mixtures. The first one was:—

Tr. ferri perchlor.	..	..	..	..	5ij.
Tr. nucis vom.	..	..	..	..	5ij.
Sod. hypophosph.	..	..	..	..	gr. lxx.
Syr. limonis	..	..	..	..	5j.
Aq. ad.	..	..	..	..	5vj.

On standing, this mixture gives a light-brown deposit, presumably of ferrous hypophosphite in the first place (hypophosphites being the reducing agents), but gradually undergoing a series of changes and latterly forming ferric hydrate. If a stock-solution of sodium hypophosph. be used the deposit takes place almost immediately. It is not a good plan to keep this salt in a stock-solution, as it soon decomposes. If a little free acid, such as acid. phosph. dil., be present the deposit is avoided. A similar ppt. is formed with ferrous salts.

Fer. sulph.	..	..	..	..	gr xviii.
Mag. sulph.	..	..	..	..	3iss.
Spt. ammon. arom.	..	..	..	..	5iv.
„ chlorof.	..	..	..	..	3iss.
Tinct. nuc. vom.	..	..	..	..	3iss.
Aq. dest. ad.	..	..	..	..	5vj.

This gives a green precipitate of Fe_2HO , which is rather apt to scare a young dispenser. Mr. Mitchell thought the incompatibility must have been an oversight on the part of the prescriber.

Sod. bicarbonat.	..	..	..	..	5j.
Sod. salicylat.	..	..	..	..	5iss.
Sod. bromid.	..	..	..	..	3ss.
Aque ad	..	..	..	..	5vj.

On standing some time the mixture turned very dark, with a black precipitate. The author blamed the sod. salicylat., but a little to his surprise found it due to the action of the bicarbonate on the bromide. Two samples of bromide behaved so, but no precipitate occurred with a third sample, although the mixture became dark in colour. Three kinds of salicylate were tried.

Ammon. benzoat.	..	..	..	..	3ij.
Ext. pareira lig.	..	..	..	..	3iss.
Syr. tolutani	..	..	..	..	3j.
Aque ad	..	..	..	..	5vj.

This forms a most unsightly mixture, the ammon. benzoat. precipitating the pareira, which adheres in a sticky coating to the sides and bottom of the bottle. There has been a lively discussion in the columns of THE CHEMIST AND DRUGGIST lately regarding the legality of adding mucilage to mixtures unless ordered by the prescriber. In some cases, and this is one, the author thought it is not only admissible but necessary. By mixing 5vj. mucilage with the syr. tolu. and the ext. pareira nearly filling the bottle (say to 5vj.) with water, and adding the ammon. benz., previously dissolved in a little hot water, a very presentable mixture is obtained.

Ol. ricini	..	..	..	..	3ij.
Aq. calcis	..	..	..	..	3ij.
Aq. anethi ad	..	..	..	..	3ij.

The author confessed that he had not yet discovered the art of making this as it stands. How can it be done?

The prescriber considerably altered the formula to

Ol. ricini	℥ij.
Polv. seacia	gr. x.
Pot. bicarb.	gr. x.
Aq. anethi ad	℥ij.

¶ Mr. Mitchell asked the opinion of members on the kind of mag. carb. to use in dispensing inhalations. Unless otherwise ordered, he always followed the examples of the B.P. by using the light variety. He then proceeded to discuss ointments, the first example being:—

Aristol	℥i.
Vaselin	℥i.
Ac. carbolic	℥j.

M.

Helbing states that "aristol is easily decomposed by light and heat, and hence all solutions should be made without the latter, and kept from the action of the former forces." He also states among other things that a convenient form of using aristol is as an ointment, 5-10 per cent., with vaseline or lanoline, but gives no hint as to its preparation. If the foregoing ointment be attempted to be made by rubbing in a mortar, it results (however greatly rubbed) in the aristol coagulating into a hard paste which is extremely difficult to separate again. Indeed, it is next to impossible to do so without the aid of a solvent—as ether. If made on a slab it is certainly better, but the aristol is very apt to remain in little patches in the vaseline, some about the size of a pin-head or larger. The best method for preparing a smooth and somewhat elegant ointment is by mixing the aristol and vaseline on a slab, transferring to an evaporating-basin and warming *very gently*, on account of the instability of the aristol; then straining through muslin, and finally adding the carbolic acid, which must be *stirred in gently*—not rubbed. The aristol by this means seems to be partly soluble in the vaseline, at all events it can be all passed through the muslin.

Lanolin	℥ij.
Adipis benz.	℥ss.
Liq. plumbi dil.	℥vj.
Otto rose	gtt. iij.

If made in the cold this ointment keeps perfectly, but if heated the liq. plumbi is almost certain to come out. A patient once complained that the rose-water was all in drops on the top of the ointment; which sage remark goes to prove the old saying that a "little knowledge is a dangerous thing."

Next as to pills. The first—

Quin. et ferri cit.	gr. iij.
Ext. nuc. vom.	gr. ½
„ aloes aq.	gr. j.
„ belladonna	gr. ¼
Ol. menth. pip.	gtt. ij.

Ft. pil. j.

i.e. 4½ gr. of powders and extracts and 2 drops of oil in each pill. There is a standard joke at "the Square" (Mr. Jos. Ince is believed to be the originator) of certain ingredients forming a pill-mess instead of a pill-mass. That fits this case exactly. A small quantity of boiling water enables one to make a mass, which must be rolled out very quickly. The pills can be turned out fairly respectable by this means, but a drop or two too much water either one way or the other is apt to spoil the lot.

Ferri redact.	gr. xxxvj.
Ext. nuc. vom.	gr. iij.
Bals. peruv. q.s.	

Ft. mass.

This is an unusual and useless excipient. [We have seen this before. A similar prescription with a satisfactory method for incorporating the balsam is given in the "Art of Dispensing," page 52.—Ed. C. & D.]

Mr. Mitchell also showed a copy of the Edinburgh Pharmacopœia of 1792, which attracted some attention.

Mr. H. Wyatt then read his paper on

TEST FOR BISMUTH.

He said that he had been using for some time a satisfactory test for bismuth based on the bismuth-iodide test

(Thresh's reagent) for alkaloids. By adding to the solution supposed to contain the metal a hydrochloric-acid solution of quinine and iodide of potassium, an orange precipitate shows the presence of bismuth. An iodide can also be tested for and gives the same reaction by using an acid solution of quinine and bismuth. Mr. Wyatt thought this was a new idea, but found that in the Year-book for 1889, page 116, there is an extract from a French periodical with the same suggestion by Mons. Léger.

[The paper referred to was published in THE CHEMIST AND DRUGGIST, July 14, 1888, but the test was used by Dr. Thresh long before that.—Ed. C. & D.]

Mr. Wyatt also read the following note on

LIQ. AMMON. ACET. AND CALOMEL.

Chemist and Druggist, December 5, 1891.

Dispensing query: Calomel reduced to Hg₂O by liq. ammon. acet. Contributor stated that his liq. ammon. acet. was slightly acid. I find that the acidity he noticed must have been from dissolved CO₂, and not acetic acid, for a slightly acid liquor causes no blackening of calomel, even after contact for a week. The best indicator for ascertaining the neutrality of the liquor is tinct. cocci. A solution of acetate of lead may be also used as recommended by B. S. Proctor in his "Manual of Pharmaceutical Testing." The lead test indicates the slightest alkalinity, and is not interfered with by CO₂ free.

OLEATES.

In making oleate of mercury 20 per cent. by the B.P. process, if the mercuric oxide be rubbed with sufficient paraffin liquidum to form a cream and then added to the oleic acid, the time occupied in making this preparation is considerably shortened. The oleate may also be slightly heated over a water-bath to make the operation more expeditious.

An animated discussion followed, and a hearty vote of thanks was passed to the readers of the papers.

A DONATION.

The Secretary announced that Messrs. Evans, Sons & Co. had presented a very complete herbarium to the society, and also a number of Lescher's "Recent Materia Medica," for all of which a hearty vote of thanks was passed. The herbarium has been compiled by Mr. A. E. Lomax, of Liverpool, and contains many somewhat rare specimens, among others the following:—*Rhamnus Purshiana* (cascara sagrada), *Pistichia lentiscus*, *Pistichia terebinth.* (Chio turps), *Capris spinosa* (caper plant), *Gentiana lutea*, *Euonymus atropurpurea*, *Prunus virginiana*, *Hamamelis virginica*, *Punica granatum*, *Arnica montana*, *Fragaria Ornus* (manna), *Eucalyptus amygdalina*, *Juniperus oxycedrus* (oil of cade), &c., &c.

NEW COMPANIES.

CO-OPERATIVE ACID AND CHEMICAL MANUFACTURING COMPANY (LIMITED) (Sydney).—Capital, 5,000*l.*, in 1*l.* shares. Objects: To manufacture sulphuric acid and other chemical products. The directors are: Messrs. H. F. Marr, chairman; William Pegrum; J. Jones; H. J. Withers, Pitt Street, Sydney; and F. G. Dawson, Pitt Street, Sydney. The secretary is Mr. R. A. Peach.

NORTHUMBRIAN CHEMICAL COMPANY (LIMITED), with a capital of 60,000*l.*, in 10*l.* shares; to carry on business as manufacturers of chemical products and drugs of all kinds, as manufacturers of sanitary and disinfectant preparations, manure soap, paper or other pulp, paper, cement, and artificial stone, and to carry on business as general merchants, mechanical, chemical, and electrical engineers. The first subscribers (who take one share each) are:—J. D. Milburn, Carlton House, Newcastle-on-Tyne; W. G. Woods, The Close, Newcastle-on-Tyne; T. Samper, Bothal Castle, near Morpeth; H. W. Bainbridge, 8 George Street, Portman Square, W.; J. B. Simpson, Hedgefield House, Blaydon-on-Tyne; T. G. Dunford, 5 Osborne Avenue, Newcastle-on-Tyne; J. C. Rollin, 1 Queen's Road, Newcastle-on-Tyne. There shall be not less than three nor more than five directors. The first are J. D. Milburn, W. G. Woods, T. G. Dunford, and J. C. Rollin. Qualification, 1,000*l.* Remuneration, 250*l.* per annum each, with an additional 10*l.* for each 1 per cent. after payment of 5 per cent. dividend.

ADVERTISING MANUFACTURERS AND
RETAIL TRADERS.

BY THOS. J. BARRATT (A. & F. PEARS).

WE take the following interesting article from the last issue of "Fame, a Journal for Advertisers."

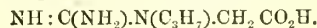
To manufacturers who spend large sums of money in advertising popular specialities nothing is more discouraging, nothing can be more unfair, and, as regards the retailer's own interests, nothing can be more shortsighted than the attitude assumed towards the advertiser's enterprise by retail traders. To me, the attitude of the retail trade is inexplicable, for, instead of co-operating with the advertisers for their mutual benefit, the retailers seem to feel aggrieved because they have no option but to sell articles for which a great popular demand has been created. For some inscrutable reason, a section of them seem to regard advertising manufacturers with jealous dislike. To begin with, they are loth to handle a new article which it is attempted, by means of advertising, to place on the market. Indeed, it is not till they find that, unless they comply with a created demand, their business is likely to sustain injury that they will give orders. Meanwhile, the probability is that they have endeavoured to sell in lieu of the advertised article some specious substitute—a policy which must recoil upon themselves in the long run. Why, if they only had the discernment to realise it, the advertising manufacturers are their best friends. Those manufacturers, by costly advertising, convince the public that certain specialities are indispensable, and so drive customers to the retail establishments. Far from diverting or deteriorating the retailer's trade, therefore, the advertising manufacturers actually supplement that trade and enable him to augment his turnover. It may be accepted as a fundamental principle of business that, if the public find they can be supplied at a certain establishment with a particular article they are eager to purchase, they will bestow their general custom there also. If, therefore, the retailer is wise and wide-awake, he will make a point of adopting a really good speciality, which the public are desirous of purchasing, were it only for the ulterior advantage which the sale thereof is certain to be attended with. And now I come to what is undoubtedly a very delicate question, as between advertising manufacturers and retailers—namely, the sale of specialities, much below advertised prices, at the stores and by habitual "cutters" of prices. It seems to me that is a matter which the advertising manufacturer cannot possibly adjust, even were he disposed to interfere with the principle of free trade as applied to retail enterprise. To meet what the retailers considered a grievance, I put them on an equal footing with the wholesale buyers, so that the retailer who might only give a 5*l.* order was treated with the same consideration in respect of prices as the large trading concerns, whose orders represented thousands of pounds. It is impossible, however, to please everybody, and the result of this concession to ordinary retailers was that the managers of the stores protested, and, in the case of three of the greatest stores to London, we were threatened with the closure of their accounts if we persisted. Well, although we were doing a very considerable and valuable business with those stores, we felt that for the success of Pears' Soap we were under no obligation to them, and we remained firm in our determination to stand by the retailers. Accordingly, the three accounts were closed. What was the result? The demand for Pears' Soap was by no means detrimentally affected, but, as it could not be purchased at the stores referred to the public went to the retail establishments. Indubitably, the diversion of this particular article of trade from the stores must have affected their sales in respect of others. This fact confirms what I have already urged—that where the public can get what they have been made eager to purchase they will likewise take their general custom. Within twelve months the stores had to resume selling Pears' Soap, their trade having, of course, suffered. I may claim, therefore, to have done as much—probably a great deal more—than any other firm to safeguard the interests of retailers. But what was our reward? From one retailer only, of all those throughout the country whom I sought to benefit, did I receive a letter of acknowledgment of the

effort which, so far as we were concerned, was palpably well-meant and disinterested. So much for gratitude. Suggestions have sometimes been made that certain large manufacturers of popular articles should stipulate to supply only such traders as agree not to sell below advertised prices. THE CHEMIST AND DRUGGIST interviewed me on this subject, and I then gave my honest opinion against any such interference with the principle of free-trade as opposed to exclusive dealing. If I were a shopkeeper, I should certainly resent any attempt at dictation concerning my methods of conducting my business. The attempted coercion of retailers would be a mischievous policy all round, if it were feasible, which it certainly is not. To curry the favour of the retailer, it may serve a manufacturer's purpose to introduce his goods; but when the sale is large it cannot be controlled. The proprietors of Sunlight Soap offered 1,000*l.* for any successful plan; but the reward has not yet had to be paid. The system referred to has been tried in America, where they endeavour to bolster up everything by protection; but the manufacturers of the largest of all American proprietary articles—the Royal Baking-powder—enterprising and enlightened people as they are, have publicly confessed the impracticability of any such scheme, as the accompanying condensation of a letter, in reply to a petition on the subject, distributed by them explains:—

"As we all understand, the 'contract-system,' so-called, involves an agreement between our customers and ourselves that they will not sell below the price arbitrarily fixed for them, and that we will not sell to anyone who does not make and faithfully observe such agreement. Our researches and our best judgment lead us to say that we do not believe the proposed system is practicable. We believe that in no case has the system been permanently established. It implies the mere theoretical presumption that artificial means will be stronger and superior to those natural forces which have made, operated, and controlled the commerce of the country for centuries. We do not believe that such a thing ever has been or can be done. So long as competition exists, it will not be possible to enforce and perpetuate honestly, fairly, and successfully, any system which involves a fixed and arbitrary way of doing business, or scale of prices and profits. In years gone by we have actually made the experiment of selling the Royal Baking Powder in larger lots at a special reduction, under a contract not to cut prices. We are compelled to say that in less than sixty days we found the contract disregarded and the prices cut. In our endeavour to be guided by principles in the conduct of our business, rather than by what might seem to be temporary policy, we have considered it our duty, first to advertise and popularise our goods, then to establish our prices so that all classes of the trade shall stand fair in the face of competition; and there leave the matter to the natural and inevitable forces that govern trade and control the interests of those who have to do with the distribution of the goods to the customer."

THE OBAN FREEMASONS (Lodge Commercial, No. 180) have installed Brother Samuel Lawrence, chemist, as Right Worshipful Master, and Brother Alexander Mackay, chemist, as Senior Warden for the ensuing year.

PTOMAINES.—Dr. A. B. Griffiths finds that the ptomaine from scarlet fever has the composition $C_5H_{12}NO_6$, that from diphtheria $C_{11}H_{17}N_2O_6$. The ptomaine from the urine of a case of mumps has the constitution



All these have been found in the urine.

BEATS THE APPLE IN THE BOTTLE.—The *New England Druggist* tells us that Mr. W. E. James, a druggist at Putnam, Conn., has found a curiosity in his back yard. He had a lot of empty bottles there, and one day one of these bottles began to move about like a living thing—it was a soda-water bottle. He picked it up, and found inside it a rat vigorously trying to get out. He was a big grey fellow, while the bottle's neck was not big enough to let a man thrust his little finger into it. The rat's body was more than three times larger than the orifice, and the mystery which puzzles everyone in Putnam is, How did the rat ever get into the bottle? No matter how the rat got in, it made trade good for Mr. James while the attraction lasted.

EDINBURGH CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.

AT the meeting held on Wednesday, December 16, Mr. William Duncan was the chief contributor. He read the four papers first mentioned here.

BISMUTH MIXTURE.

The following prescription is frequently ordered by a medical practitioner in a provincial town:—

Liq. bismuthi (B.P.)	3iss.
Acid. nitric, dil.	q.s.
Aquam ad	iv.

Ft. mist. Sig.: 5ij. ter in die ex aq.

The intention of the prescriber is said to be to add nitric acid till the bismuth is precipitated as oxynitrate, his opinion being that freshly precipitated oxynitrate is more active than any other bismuth salt. Mr. Duncan showed that the liquor requires 3 fluid drachms of dilute nitric acid for precipitation. It is not subnitrate, but citrate of bismuth that is thrown down. The citrate is precipitated in an exceedingly fine state of division, remains suspended for a considerable time, and even after it has settled is easily diffused again by a gentle shake. The formula gives an excellent mixture of bismuth in suspension, without the addition of mucilage or any other viscous agent.

MANGANESE ORE.

An ore obtained from the Leicht mines, situated in one of the Banffshire glens, about thirteen miles from the coast. The mines were discovered in 1840, and were worked for about six years. Owing to their situation, however, and the difficulty and cost of transit, they were eventually abandoned. The analysis of the ore gave the following result:— FeO , 26.82; Al_2O_3 , 3.60; MnO , 11.21; MgO , 0.97; CaO , 1.96; Na_2O , 1.21; K_2O , 0.96; H_2O , 1.85; SiO_2 (soluble), 0.60; SiO_2 (insoluble), 50.10; P_2O_5 , 0.39; Cl , 0.03.

COMMERCIAL PUTTY-POWDER.

Putty-powder is generally supposed by pharmacists to be oxide of tin, and is sent out by some wholesale houses labelled *stanni oxidum*. It has frequently been a stumbling-block to both Major and Minor students, and is usually brought out by a student as oxide of lead in his analysis at a first attempt. An examination of a commercial sample, which is fairly typical of the article usually found in commerce, gave the following result:— SnO_2 , 26.74; PbO , 64.03; Fe_2O_3 , 0.88; CaO , 1.62; MgO , 5.43; H_2O , 0.30; and CO_2 , 0.65.

Mr. Duncan also read a note on the "Solubility of Arsenic Trisulphide in Water," showing that the reason why, when sulphuretted hydrogen is added to an aqueous solution of arsenious oxide, no precipitate is formed, is probably because the arsenic trisulphide is in the colloidal condition. The addition of an acid immediately throws down the characteristic yellow precipitate.

LIQUOR COCAINE HYDROCHLORATIS, B.P.

Mr. John Lothian finds that a distinct aromatic odour of salicyl-methylester (oil of wintergreen) is given off when the cocaine salt is added to the boiling solution of salicylic acid. To obviate the decomposition, he suggests that the B.P. directions should be amended to read:—"Boil the water and add the salicylic acid; cool, and add the hydrochlorate of cocaine."

Mr. Duncan also read a note, by Mr. A. G. Hendry, on "Siebold's Mercuric Chloride Test for Arsenic," and gave a demonstration of its application and delicacy. A discussion followed.

"SCIENTIFIC MYSTERIES."—If anybody with an eye to Christmas entertainments is looking for information upon the *modus operandi* by which the most interesting chemical and physical illusions may be produced, here is the book needed. The explanations are compact and clear, and are fully supplemented by cuts and diagrams. A chapter on "Parlour Chemical Magic" is particularly timely.—*Newcastle Chronicle*.



AND

Literary Notices.

Baldness and Greyness: their Etiology, Pathology, and Treatment. By Tom Robinson, M.D. Third edition. London, 1891: Hirschfeld Brothers. Cr. 8vo. 1p. xii. 137. 2s. 6d.

THERE is a great deal that is curious, interesting, and instructive in this small volume. To chemists it is notably attractive, for they are generally the first to whom anyone resorts for advice regarding the care of the hair. Some knowledge of the physiology of the hair, the diseases which afflict it, and methods of treatment is, therefore, very necessary, and it may be obtained through a perusal of Dr. Robinson's pages. Several useful formulae are given, but usually the author indicates the nature of the treatment in such a way that the intelligent pharmacist can utilise the advice to the best advantage.

The Chemical Analysis of Iron. By A. A. Blair. Second edition. Philadelphia and London: J. B. Lippincott Company. Royal 8vo. Pp. 314.

THIS very handsome volume deals with a department of chemical science in which there are comparatively few textbooks of importance. Although professedly only a work dealing with the analysis of iron, steel, pig iron, iron ores and materials, such as limestone, clay and coke, used in iron smelting, it really is more comprehensive since all the metallic associates of iron are noticed from the analytical standpoint. All the methods are described with great care, some of them are special to this volume, and we have found none which we could call unreliable. The matter is well arranged, nicely printed, and the illustrations of apparatus (much of which, we may say, is original in design) are of unusual excellence. Appended to the volume are useful reference tables and a comprehensive index.

Materia Medica and Therapeutics. By John V. Shoemaker. Philadelphia and London: F. A. Davis. Vol. ii. 1891. Royal 8vo. Pp. xxi., 650. 20s.

WE understand that the first volume of this work (which did not come under our notice at the time of publication) is devoted to pharmacy, general pharmacology and therapeutics, and remedial agents not generally classified with drugs. The present volume has "especial reference to the clinical application of drugs." In "drugs," Dr. Shoemaker includes medicinal substances of organic and inorganic origin, thus giving us a definition which is generally accepted nowadays, for want of a better term, but which in the strict sense excludes chemicals. While his book is to be taken as a commentary upon the therapeutics of U.S.P. medicines, it takes in the more common North American vegetable drugs and new remedies of all kinds. Great care has apparently been bestowed to give a succinct statement regarding the physiological action of medicines, but that is by no means the most valuable part of the volume. We are inclined to give practical therapeutics this position, for it is here that Dr. Shoemaker's work has distinctive excellence. In addition to giving in this section the gist of recent literature regarding the application of remedies, the author includes numerous prescriptions showing how they may best be administered. The value of the prescriptions to British practitioners is to some extent minimised by the fact that they have reference to U.S.P. preparations, but they are so suggestive that the busy practitioner, no matter of what nationality he may be, cannot fail to get ideas from them. It is a very readable book and thoroughly practical, which characteristics make it worthy of a place in the physician's library.

PHOTOGRAPHIC NOTES.

(Written for THE CHEMIST AND DRUGGIST.)

NEW PROCESS FOR TONING BLUE PRINTS.

Dr. W. P. Jenney communicates to the *Scientific American* a description of a process for giving to the common blue print-paper tones varying from a brilliant blue through violet-blue to neutral tint and warm shades of grey. The solar printing is carried out in the usual manner. The best results are obtained with dark prints, as the intensity of the colour is somewhat reduced by the toning process. The following baths are employed:—

<i>Bath A.</i>					
Hydrochloric acid	..	..	..	..	3 to 4 drops.
Water	..	..	..	..	16 oz.
<i>Bath B.</i>					
Solution of ammonia	..	..	..	..	5 to 10 drops.
Water	..	..	..	..	16 oz.
<i>Bath C.</i>					
Alum	..	..	..	..	2 oz.
Tannic acid	..	..	..	..	1 drachm
Water	..	..	..	..	16 oz.

The prints are immersed face downward in bath A until all the soluble salts contained in the paper are dissolved and removed, then dipped into bath B until the negative turns a violet-blue and the whites are clear, care being taken that the immersion in the ammonia be not continued too long, as the definition of the picture may be injured. The prints are transferred from the ammonia bath, placed face upward in a tray filled with bath C, and exposed to bright sunshine for from five to ten minutes, until no increase in the strength of the picture can be noticed. The pictures are finished by toning in bath B until the desired shade of colour is obtained, the picture becoming first a brilliant blue, then violet, and finally, by prolonged action, bluish grey or neutral tint. The toning may be varied by a second immersion in the tannic-acid bath C, followed by a second toning in bath B. After toning the prints are dried in the sunlight in the usual manner.

SENSITIVE BITUMEN.

Herr Valenta, of Vienna, has published a complete monograph on the subject of rendering bitumen sensitive to light. Syrian asphalt is the kind generally used in photomechanical work, and it was one of the first agents tried for obtaining sun pictures. Kayser, of Nuremberg, examined bitumen chemically and discovered the method of eliminating the insensitive constituents by washing and decantation, &c. His process consists of first treating the powdered asphalt with spirit, sp. gr. .835, then treating the residue with boiling ether, sp. gr. .725. Summarising commercial methods we have—(a) Solution of the raw bitumen in chloroform and precipitation with from three to five times the quantity of ether; (b) Kayser's method of treating raw bitumen with ether; and (c) Husnik's method of dissolving the asphalt in as little German turpentine as possible, and precipitating with ether—all obviously costly, not only from the solvents used, but also because only a small portion of the raw material could be used.

Kayser found that spirit extracted 4 per cent. of a resin called alpha resin, which has the formula $C_{32}H_{16}S$. This is not sensitive to light. On treatment of the residue with boiling ether 44 per cent. of the weight of raw asphalt was dissolved, and the resin dissolved is the beta resin, which has a formula of $C_{64}H_{32}S_3$, and is sensitive to light, but not so much so as the residue insoluble in ether and alcohol, the gamma resin, which has a formula of $C_{32}H_{12}S_2$. Thns the sensitiveness to light increases with the percentage of sulphur, and Valenta tried by the incorporation of sulphur to render the whole sensitive. He dissolves 7–10 grammes of flowers of sulphur in a sufficient quantity of bisulphide of carbon, and to this adds 100 grammes of powdered raw asphalt. The mixture is shaken till complete solution is effected. The bisulphide of carbon is distilled off by means of a water bath, and the residue heated for a long time on a water

bath and afterwards in an air bath gradually to 130° C., which temperature is maintained for several hours. During the heating sulphuretted hydrogen escapes; care must be exercised not to overheat and char the mass. The product thus obtained gives, when dissolved in the proportion of 4 parts to every 100 parts of coal tar benzole, a very light-sensitive preparation, which is one and half times more sensitive than any preparation hitherto used. That the alpha and beta resins are converted into the gamma resin, Valenta regards as proved, not only from chemical but also spectroscopic examination. Of the value of this research few are aware, and even the English photographic journals have taken but little notice of it. The price of asphalt, or bitumen, in the raw state to photoincographers is 1s. per lb., and that of the prepared sensitive bitumen 5s. per oz. Kayser's process renders the whole of the raw material light-sensitive, instead of only 52 per cent. of it. This should mean a considerable reduction of cost. Kayser also points out that it may be possible to make the bitumen even more sensitive, still, by further treatment on the same lines.

WINTER WORK.

Society meetings are now in full swing, and we would suggest to photographic chemists the desirability of sending to the secretaries of societies specimens of their specialities in the way of lantern plate developers and other accessories. Bromide paper, both for contact printing and enlarging, will also be in request, and developing and toning solutions may be pushed. Last year the rage was for black and white or engraving-like prints; but warmer tones are again popular, and even bromide paper is to be toned. The best formula we have come across yet for this purpose is the following, which may well be put up as a speciality:—

The Developer.

A. Sodium sulphite, pure	..	..	..	20 parts
Eikonogen	..	..	..	4 "
Distilled water	..	..	..	300 "
B. Carbonate of potash	..	..	..	50 "
Distilled water	..	..	..	300 "

For normal negatives mix

Solution A	..	..	..	50 "
Solution B	..	..	..	20 "
Water	..	..	..	150 "

For soft, thin negatives increase the quantity of A to 80 parts; for harsh, full-of-contrast negatives increase B to 30 parts and the water to 200 parts. The temperature of the solutions should be at least 20° C. This developer gives a rich black tone, and if the acid sulphite fixing-bath be adopted, no clearing-bath need be used. Brown tones may be obtained by giving a full exposure, and adding from 5 to 15 drops of a 10 per cent. solution of bromide of potash to every oz. of mixed developer. After thoroughly washing the fixed prints they should be placed for 10 minutes in 5 per cent. solution of nitric acid, and again well washed, and then completely bleached in the following mixture:—

Sulphate of copper, pure	..	..	1 part
Bromide of potassium	..	..	1 "
Distilled water	..	..	200 "

When completely bleached, the print should be well washed for at least half-an-hour, and then placed in day or actinic light, in a dish and flooded with a solution composed of:—

Solution A, above	..	..	5 parts
Solution B, above	..	..	2 "
Water	..	..	500 "

Very slowly and gradually the image reappears, first bright red, then changing through red brown, blackish red, and, finally, into a rich deep violet black. When the desired tone is reached, immediately place the print in a solution of citric acid, 1 : 100, or in a solution of sodium sulphite, acidulated with tartaric acid; then wash well, and dry. The above process is, of course, applicable to lantern slides, bromide prints, and enlargements, and is so easy and simple that a demonstration before any society should lead to business, as there is now a strong demand for toned bromide prints.

HUMOURS OF THE COUNTER.

IF we accept Carlyle's uncomplimentary estimate of the "many-headed" public, we shall, as retail traders, expect to be frequently amazed or amused at exhibitions of misapprehension and ignorance; but perhaps free education will do away with all that, and the infant in arms be able to give his antique ancestors valuable hints on the extraction of the fluid contents of an egg from its calcareous envelope.

In recalling a few illustrations of the public's mental attitude towards our occult and mysterious profession, I willingly pass over the "longer catechism" required when the fifteen-year-old nurse-girl demands a "baby's glass," and the "shorter catechism" used to effect a satisfactory sale of a "hounce of magnesia."

Some errors are quite natural and excusable, such as the request of a lady customer, a few days ago, that I would supply her with some *fresh* lavender-water—it *must* be freshly made! But when a respectable woman expresses astonishment that syrup of senna requires a bottle or cup for its conveyance, one's mind remains in a state of passive stupefaction.

There was an idea of economy in the action of a recent customer. Sending him a 1-oz. bottle of "the drops" by ordinary post, a small box of shot was enclosed, the rattle of which might cover the gurgle of the contained liquid, and delude the post-office people into the notion that the package was a harmless box of pills. In a few weeks the recipient called, and, expressing his thanks for the "pills," said he had taken one with each dose of the medicine, and they had done him a world of good!

Patience is undoubtedly one of the cardinal virtues, but it was misapplied by a customer the other day, who spent the snappy, and otherwise peaceful, hours of a Sunday afternoon in attempting to fill a 3 oz "I.R." ball syringe through its bone fitting by means of a small jug! When I compressed the ball and filled it in the usual way, his face was a study.

The principle that "a little knowledge is a dangerous thing" was well exemplified in the case of a gentleman I know, who had some knowledge of chemistry. I dispensed for him a weak boric acid lotion with hot water, and sent it, while still warm, to his residence. He brought it back shortly afterwards, in a state of terror. He had seen the word "acid" in the prescription, and thought the heat was developed by the addition of water—as in the case of sulphuric acid—and that it must be a terrible and dangerous preparation! By the way, it is a pity a less alarming (to the patient) name could not be used for this very mild and feeble radical.

Many quaint and curious ideas regarding drugs (as THE CHEMIST AND DRUGGIST "At the Counter" column well sets forth) are entertained in the country, and I have had my share of "bold almanacks," "oils of serpents," "snails," and "St. John's wort." On one occasion a countryman entered the pharmacy leading a half-grown donkey, whose shaggy and serious countenance presented an extraordinary appearance over the tooth-brush case. Said the rustic: "I s'pose you don't git many o' that sart o' customers, do 'ee, master?" The repartee was obvious.

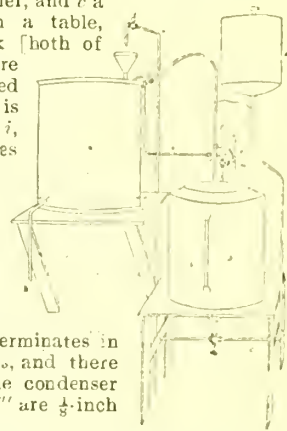
But the mistakes are not always on the side of the customer. Once, at the festive season of Christmas, I was informed that the Weights and Measures Inspectors were about to make their annual rounds. So that one morning, when a couple of respectable individuals presented themselves and said they had come about the *weights*, I hunted round and got them together, with the exception of the quarter-ounce. As I brought the rest forward, and apologised for its absence, a look of amazement, followed by a lambent smile, overspread the men's faces. "Why, sir," said they, "we've come about the *weights* wot plays in the streets!"

It was a fashionable and gallant acquaintance of mine who was conversing politely with a young lady over the counter. She had just ordered a syphon of soda, and he was leaning upon it while he talked. In his excessive politeness he pressed a little too heavily, and a stream of liquor sodii effervescens played upon the lady's "clean-billed" frock.

E. D.

APPARATUS FOR DISTILLING WATER.

PROF. W. M. STINE, of the Ohio University, gives in the *Scientific American Supplement* a figure and description of a still for use by druggists, which has a constant-feed attachment. We reproduce the sketch. The condenser, *a*, stands on a shelf, *b* is the boiler, and *c* a gasoline stove supported on a table, while *g* is the gasoline-tank [both of which are unnecessary where a gas-stove can be worked cheaply]. To the boiler is attached the water-gauge, *i*, while the steam-pipe, *f*, passes to the rear of the condenser. A syphon, *h*, leads the hot water from the top of the condenser to the bottom of the boiler, and the feed is regulated by the gauge-cock at *c*. Cold water is introduced into the condenser through the pipe *d*, which terminates in an ordinary bent gas-burner, *e*, and there is an overflow-pipe from the condenser not shown in the cut; *j*, *j'*, *j''* are $\frac{1}{2}$ -inch brass pipe-unions.



The boiler is made of plished tinned sheet copper, and has the tinned surface turned in; it is 12 inches high by 10 inches in diameter. Both top and bottom of the boiler are pressed copper plates, such as are employed for the bottoms of coffee-boilers. The bottom should have the concave surface turned out so as to catch the flame and heat from the stove, while the convex surface is turned outward on the top. On what is to be the front of the boiler-shell, and at a distance of $1\frac{1}{2}$ inch from both the top and the bottom, two holes should be punched on a vertical line, large enough to admit a $\frac{1}{2}$ -inch pipe elbow. These elbows should be soldered on from the inside before the top and bottom are fastened in place. After completing the boiler, a glass tube, *i*, of a diameter to snugly fit the openings in the elbows, should be cut about $\frac{1}{2}$ inch longer than the distance between the edges of the elbows, and then fastened in place with a suitable cement.

In the centre of the top is punched a $\frac{3}{8}$ -inch hole, and a piece of brass pipe of the same diameter and 6 inches in length is soldered in so as to project not more than $\frac{1}{2}$ inch in the boiler, and a $\frac{3}{8}$ -inch brass union is fitted to the end for attaching the steam-pipe leading to the condenser. Brass unions are preferable, as they need no packing and do not corrode so readily. The condenser in this case is 11 by 14 inches, made of zinc, and contains the usual coil of lead pipe, but a 5-gallon cask or a lard-can, with a coil of $\frac{3}{8}$ -inch lead pipe about 20 feet in length, have been used, and found to be entirely satisfactory as well as cheap.

To the steam end of the condenser coil is soldered another $\frac{1}{8}$ -inch union, *j*. A piece of suitably bent $\frac{3}{16}$ -inch lead pipe is also soldered on the unions, and when these are screwed up make the steam-connection from boiler to condenser. [We object to lead. Tinned iron is preferable—ED. C. & D.] The three unions on the steam and syphon pipes are not strictly necessary, but, as they are not expensive, will repay their cost in convenience when taking the still apart for cleaning and repairs. The distilled water drips from the end of the condenser coil at *h*.

The syphon feed, *h*, is also made from $\frac{3}{16}$ -inch lead pipe. This should be so bent as to project an inch or so into the top of condenser, and a piece of rubber tubing 1 foot in length is then firmly wired on the end, taking care to make the joint air-tight. The rubber tube must be supported by a bottle ballasted with shot, or other suitable float, so as to keep the end of tube always in the hottest water at the top of the condenser and about 1 inch beneath the surface. If the rubber tubing is of sufficient length, it will prevent the end of syphon becoming uncovered from carelessness. At *j* is another union connecting the pipe *h* with the boiler; this is screwed on an ordinary gas-burner tap, *n*, which is soldered to another $\frac{3}{8}$ -inch brass pipe, *o*, passing down to within 1 inch of the bottom of the boiler. It may be placed on a

line directly back of water-gauge, and should be as near the shell as possible to obtain the best circulation of the feed-water. To the barrel of the tap, *n*, a 4-inch wire, *m*, is soldered; this moves over an index, *e*, which should be distinctly graduated. This index is made of sheet zinc, and tacked to a strip of wood fastened to the wall.

The condenser may be permanently placed on a shelf, and so adjusted that the surface of the water in it is at least 18 inches above the usual water-level in the boiler. This will insure sufficient fall to operate the syphon.

In the operation of the apparatus, steam passes into the condenser and heats the water circulating around its coils as the result of its condensation; this then rises to the top, and there passes off through the overflow-pipe and the feed-pipe to the boiler. If the cold water be allowed to just drop into the condenser, it will keep this part sufficiently cool, and the feed-water will be passed back into the boiler heated almost to the boiling-point, and there will be very little water remaining to escape through the overflow. An apparatus of the size described distills two pints of water per hour.

THE NUT-OIL TRADE OF INDIA.

A VERY large trade is done in Southern India in ground-nuts (*Arachis hypogæa*), which are exported from Madras and Cuddalore and still more largely from Pondichery. The plant was originally imported to India from the French settlement of Senegal, but even there it is not indigenous, its proper habitat being South America. The chief area of production in India is South Arcot and Pondichery. The plant grows readily on very poor soil, and does not require irrigation. That its cultivation is a most profitable industry can be gathered from the fact that the total cost of production amounts to not more than Rs. 10 per French candy (a French candy is 2.40 kilogrammes, equal to 528 lbs. English), while the same quantity is selling now at Rs. 25.8 per French candy and has been as high as Rs. 27.8 within the last three months. Recently large warehouses have been erected at the south end of Pondichery to receive the ground-nuts brought in for export; and although there are twelve of them, and each is supposed to contain 100,000 bags, they are by no means sufficient, and during the season every spare shed and even houses and stables are filled to overflowing with ground-nuts. The season is now over, says the *Madras Times* of November 19, the last ground-nut steamer has left, and it is asserted that 100,000 tons of "pistaches," which is the local name of the article, have been exported this year, besides a large quantity of oil. There is a large and increasing trade in the oil between Pondichery and Rangoon and Moulmein; this has only arisen of late, as the oil has only recently come into favour with the Burmese. The Burmese do not employ ghee in their cookery, as natives of India do; in fact, they do not even milk their cows, so of course do not make butter, and for their cookery up till a recent date used gingelly oil. But they have now discovered the superior quality of the ground-nut oil, and direct steamers take weekly 300 to 400 barrels of this oil to Rangoon and Moulmein; a considerable quantity is also beginning to be exported to Penang and Singapore. The whole of this oil is made in native mills, the ordinary rude hollowed-out trunk of a tree with a large heavy branch of another tree in the hole, which has a cross-piece to which a bullock or two bullocks are attached and driven round and round. If adequate European machinery could be erected, a very large saving would be effected by sending the oil alone, of which the seeds contain 43 per cent., to Europe. An attempt was made in Pondichery, and oil-mills worked by steam-pressure were started there, but, after changing hands several times, they were finally abandoned, the machinery sold and taken to Bangalore, where it is now employed in making castor oil. The causes of failure of this enterprise were the great expense of expressing the oil as compared to the native methods.

PORCINE ALBUMEN.—Economy is the rule in Armour's Chicago pig-sticking establishment. All the blood is collected, and the albumen removed from it and prepared in the well-known flaky style.

MICROSCOPY FOR STUDENTS OF PHARMACY.



At the last meeting of the American Pharmaceutical Association, Professor H. M. Whelpley, M.D., who is an experienced pharmacist and teacher of microscopy, read a paper entitled "A Course in Microscopical Technology for Colleges of Pharmacy." We are indebted to Dr. Whelpley for a reprint of his paper, and an abstract of it is opportune in view of the importance of the subject to all pharmacy students in this country. Dr. Whelpley rightly maintains that the solid foundation for accurate knowledge of microscopy is an understanding of the principles of optics, which may be imparted in the first lecture or two of the microscopy course. Then follow some practice with the simple microscope, a few hints as to how to sit at the table, how to place the instrument so as to get the most work out of it with the least discomfort, and how to manage the light. Only low powers should be given at first. Dr. Whelpley proceeds to say:—

Never give the students very small or unfamiliar objects until they have complete control of the instrument, and realise the relation of object and image. This is the time to teach the desirability of examining objects by both reflected and transmitted light.

The measuring of magnified objects is next in order. This serves to fix the real value of an instrument on the minds of the beginners, and I find that they appreciate it. First measure familiar and large objects, and then follow with less familiar and smaller ones.

By this time students will be ready to determine the magnifying powers of both simple and compound instruments. See to it that they learn the principle and make free use of it. Every student who has an instrument of his own should be permitted to bring it to the class, and determine the value of the various combinations, as well as taught how to record them.

The use of the camera lucida and drawing naturally follow at this point, and should be given attention. A review of all that has been studied is appropriate and will determine whether the students are ready for the next step.

The mounting of objects will have excited the curiosity of students by this time, and they will be ready to give it close attention. Commence with the very simplest forms of dry mounts, and then step to the use of liquid media, and finally the use of "balsam" and other resins. The mounting of crystals and other objects which require special manipulation can follow the simple work.

Section-cutting and the preparation of specimens of various kinds will next interest the student. Here special attention and practice should be confined to pharmacy, but reference can be made to work in animal histology and pathology.

The proper care of the microscope should be insisted upon in the class-room, so that the students will not neglect it at home.

Towards the close of the course is the proper time to impress the students with the importance of forming collections of such specimens as are of use in work or entertaining when exhibited. I always feel as if the microscopist who never makes permanent mounts is like a person who does not preserve books for reference after having read them. Both books and permanent mounts are of use to others.

The course of instruction must not be closed without reference to the literature of microscopy. Each teacher will have individual ideas as to books and periodicals, but all must agree that it is desirable to keep posted on current topics, and each owner of a microscope should take one or more periodicals.

TUMENOL is the name given to a bitumen distillate (tumenol-sulphonic acid). It is recommended for the treatment of moist eczema (which it dries), pruritus, &c. It seems to us like a cousin-german of ichthyol, and is used similarly.

IRISH PHARMACEUTICAL EXAMINATION.

ONE of three candidates who were examined in October sends the following account of his experience, Dr. Falkner being the examiner.

GENERAL CHEMISTRY.

We were asked to answer two of the following questions:—

1. Explain the terms: Saturated hydrocarbon, unsaturated hydrocarbon, substitution product. Give examples.

2. What volume will a litre of hydrogen gas, at a pressure of 760 mm. and 0° C., occupy if the temperature rise to 20° C.?

3. What weight of ferrous phosphate will be obtained from 100 grains of ferrous sulphate (dry) by the B.P. process? [Fe 56. P 31. O 16.]

4. How would you detect the presence of nitrites in a specimen of pump-water?

5. How can the organic acids—citric, tartaric, and oxalic—be recognised by chemical tests?

Then we had to answer all the following:—

1. How is iodide of potassium prepared? What is the usual impurity, and how may it be detected?

2. How does sulphuric acid act upon (a) carbon, (b) copper, (c) iron, (d) alcohol, (e) oxalic acid?

3. How are the pharmacopoeial salts of silver obtained from metallic silver? Give equations.

4. What is the apparatus needed for (a) preparing a volumetric solution and (b) for performing a volumetric analysis?

5. Enumerate the official carbonates, giving their formulæ and synonyms.

In the afternoon we turned up for the practical part, and were asked to

1. Find salt in box 1.
2. Find organic acid in box 2.
3. Discover alkaloids in box 3.
4. Estimate the weight of available chlorine in 1 fluid ounce of a sample of liq. calcei chlorinat.

The salt in box 1 was sulphate of magnesium, the organic acid was tartaric acid, and the alkaloid strychnine. Whilst this was going on we had the pleasure of an interview with Dr. Falkner. After a desultory conversation with the examiner as to the course of chemical analysis which I pursued, he commenced to "quiz" me generally, and amongst the questions he asked me were: Give an explanation of the B.P. process for the preparation of liq. ferri perchloridi fortior. [(1) Solution of ferrous chloride. (2) Converted into ferric chloride by nitric acid. NO (nitric oxide) is given off.] Preparation of phosphoric acid, and impurities. Test for metaphosphoric acid. Separation of Pb and Hg in an acid solution. Explanation of the process for preparation of gun-cotton (pyroxilin). What is the chemical composition of cotton-wool? Name the official phosphates. How would you distinguish ferric salts from ferrous? How would you prepare calcii hypophosphis and sodii hypophosphis? What happens when heat is applied to hypophosphites?

My impression of this section was that it contained many chemical curiosities and lacked broad questions of pharmaceutical interest. This terminated our dealings with Dr. Falkner. Next day Dr. Evans examined us in

PHARMACY.

He took us in one by one to an oral examination of forty minutes' duration. At last I found myself face to face with the veteran of pharmacy and his array of ointment-pots and boxes.

The following I got to recognise:—Pil. colo. et hyoscy., oleum theobromæ, emp. menthol, iodoform in crystals, chloral hydrate, bismuthi oxid., saccharum lactis in crystals, spermaceti, ammoniacum.

Following this was an interesting conversation on emulsions. What is an emulsion? [The body to be emulsified was so broken up that each particle of it was surrounded by a film of the emulsifying agent.] What kind of an emulsion was mistura ammoniaci? [A natural emulsion.] How would I make an emulsion—e.g., ext. filicis maris? [Triturate 2 parts of the oil with 1 part of acacia (pow-

dered); then add all at once 1½ part of water, and triturate with three or four turns of the pestle, adding the remainder of the water gradually with as little trituration as possible.] What is the best emulsifying agent for oil of turpentine? I was proceeding with gum tragacanth (powdered) when he stopped me and asked was there any other. "Yolk of egg." "None better."

There were many other instances, with numerous questions arising therefrom.

A series of questions on the doses of B.P. preparations, and on poisons and their antidotes, followed. At this stage he gave me several prescriptions to read in full Latin, and I had to describe the manner of preparing the principal ingredients.

This was an exhaustive examination—in fact, in this short space of time we had travelled well over the B.P.

In practical pharmacy I had to spread a round plaster of emp. ferri with adhesive margin. That was all in the oral and practical departments of pharmacy. Later on we got the written paper:—

1. How would you make permanganate of potash pills, and what substances are peculiarly objectionable, and why?

2. How is hydrate of chloral prepared? State formula of any preparation containing it. Give strength and dose.

3. State the formula for pilula ferri iodidi. Describe accurately the mode of preparing the liquor for it, and for syr. ferri iodidi.

4. How do you prepare liq. arsenicalis and liq. arsenici hydrochloricus? How do you distinguish them? State strength and dose of each.

5. Name the liquid extracts of the B.P., and state how dandelion, cascara sagrada, and pareira are prepared.

This finished our intercourse with the polished doctor.

The third day brought us face to face with Dr. Montgomery, who submitted the following questions in

MATERIA MEDICA AND BOTANY.

(Three to be answered in Materia Medica and two in Botany.)

1. Give a full description of the official drugs obtained from the N.O. Liliaceæ.

2. Give the source, characters, composition, and properties of benzoin.

3. Pepsin: Give the B.P. method of preparation, characters, and tests.

4. Describe ipecacuanha. Name its most important constituents, and its official preparation.

5. Bromine: State the B.P. definition, and give the physical characters of the official bromides.

1. Describe fully in botanical terms the foxglove plant.

2. Define rhizome, root, fruit, seed.

3. What are the chief characters of the Labiate family?

Whilst this was going on we were called up, one by one, to the practical part.

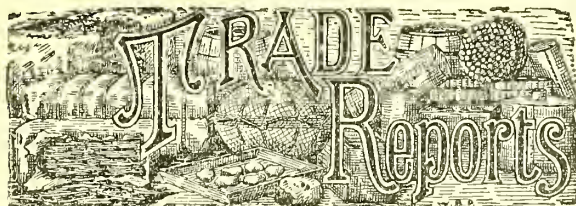
He placed a plant in my hand. I could not recognise it, although he assured me it was a common one. Next I got the capsule of *Datura stramonium*; then chamomile and broom. He then placed in my hands a fern, asking about the frond, pinna, sori, and all regarding them.

The following materia medica specimens were given for recognition:—Cascara sagrada bark, catechu, coca-leaves, krameria-root—source and preparations of each.

Finally, we had to tell how to estimate morphine in a sample of opium.

This finished the mysterious ordeal, and my experience of it, and of the courteous and kindly examiners, is altogether favourable.

ENORMOUS MICROSCOPE.—The Poeller Physical Optical Institute, of Munich, is to send a microscope to the Chicago Exhibition. An electric light of 11,000-candle power is to be used for illumination, the heat produced being counteracted by the evaporation of liquid carbonic acid. The acid-cylinder is to be connected with the microscope in such a manner that an electric regulator automatically opens a valve and allows a drop of the acid to escape in a spray on the metal to be cooled. The microscope will magnify 16,000 times and will cost 4,000l.



Notice to Retail Buyers.—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

CANNON STREET, December 23.

A BARK SYNDICATE AT WORK.—A syndicate of bark importers, formed for the purpose of keeping up the price of cinchona bark, commenced its operations at last Thursday's bark sales in Amsterdam. At those auctions 470,444 kilos. of manufacturing bark (containing about 20,000 kilos. quinine) were offered. Of this supply, 30,000 kilos. bark, representing 1,453 kilos. quinine, were bought in, leaving 480,069 kilos. bark (= 18,548 kilos. quinine) as the total purchases by the various competitors. The syndicate purchased over one-fourth of this quantity—viz., 118,441 kilos. bark, equal to 5,136 kilos. quinine sulphate. This quantity, it should be borne in mind, has not gone into consumption, but is at present stored up. The primary object of the combination is said to be the advance of the unit to 7c., or $1\frac{1}{4}$ d. per lb., and it is believed that funds to the extent of 500,000fl. (nearly 42,000l.) are at its disposal for the realisation of this object. The total cost of the bark purchased at Thursday's auctions by the syndicate was 60,000fl. or 5,000l. If, therefore, the combination continues its operations, in Amsterdam only, upon the same scale at succeeding auctions, its funds will be exhausted at the end of August next year, and it will then, upon the basis of the present price, have accumulated about 950,000 kilos. bark. At the preceding Amsterdam auctions the unit averaged 583c. Since then quinine has fallen 10 per cent. in value, and, calculating upon that basis, an average unit of 52c. would have been the true market level. On Thursday last, as a matter of fact, the average rose to 565c.; hence the purchasers who bought for actual consumption had to pay an average of 080c. per kilo., or about $\frac{1}{4}$ d. per lb. more for their quinine than they would presumably have paid had the market been allowed to follow its natural course. As the manufacturers bought bark representing about 13,000 kilos. quinine, it follows that the syndicate, by spending 60,000fl. (5,000l.), compelled the makers to an extra outlay of about 10,700fl. (900l.).

THE DEARNESS OF CASTORUM.—Messrs. Aug. Faber & Co. write from 60 Mark Lane:—"As you characterise the prices paid at the recent castorum sale as probably the highest on record, it may interest you to know that in August, 1852, first quality fetched up to 77s. per lb.; on the other hand, in August, 1870, firsts sold at 6s. 3d. This last figure is the lowest on record."

BROMINE SALTS.—The circular issued last week by the English bromine-makers, in which they withdrew all quotations, has now been cancelled, and the previous prices have been re-established. It appears that for some time the Stassfurt bromine works have been in the habit of charging a somewhat higher price to their German than to their English customers, the cause being that in England the German product was more exposed to American competition than in Germany. The German makers of bromides, it is said, protested against this arrangement. To please them the Stassfurt directorate raised their English quotation to the German level, and this led the English makers to withdraw their quotations, as reported last week. The raising of

the German price would inevitably have encouraged speculation in the article and the speculators would probably have bought American bromine (of which the price had not been raised) rather than German, which had been advanced in price, and the German managers, when they saw this, reduced their English quotation to its former level, thus enabling the English makers to revert to the old quotations.

CAMPHOR (CRUDE).—The spot market is steady, but unchanged. For arrival quotations are slightly easier, Japan camphor for December-January shipment being offered at 127s. 6d. per cwt., c.i.f. to-day.

ERGOT OF RYE.—There have been several arrivals (some rather large) from Spain this week. The market is somewhat lower, but we do not think that less than 2s. 10d. per lb. has yet been accepted for Spanish ergot on the spot. German (Russian?) ergot is offering for prompt shipment at 2s. 3d. per lb., c.i.f. terms.

OIL (PEPPERMINT).—It is reported to-day that Mr. H. G. Hotchkiss' peppermint-oil factory, in New York, has been destroyed by fire. Importers here have received instructions not to sell below 14s. per lb., London terms.

OPIUM.—Our Smyrna correspondent writes under date of December 14:—Since November 23 we have had a very active time for all descriptions of opium. The sales up to December 12 amount to about 450 cases, the greater part of which have been taken for America. The Dutch Government have commenced buying also, and hitherto only 10 to 12 cases of Karahissar opium have been taken, at the equivalent of 8s. 5d. per lb. f.o.b. Our prices to-day are firm as hereunder: Karahissar opium, 8s. 4d. to 8s. 5d.; Yerli, ditto, 8s. 3d. to 8s. 4d.; old and new manufacturing, usual run, 7s. 8d. to 7s. 9d. per lb. f.o.b. As a natural consequence the large sales have hardened our market, and it is the universal opinion that prices will now be maintained for some time to come. The weather continues favourable for the opium sowings. The arrivals to date are 2873 cases, against 1433 at the same time last year; and at Constantinople 2,500 cases, against 2,765 cases.

QUICKSILVER is dull and rather easier in secondhand, which offers at 7l. 14s. per bottle. The importers still quote 8l.

QUININE.—The market has ruled exceedingly dull, with sellers of German bulk quinine (secondhand) at 9d. per oz., but no buyers over 8 $\frac{3}{4}$ d. per oz. To-day, however, there is some improvement, and we hear of a sale of 40,000 oz. on the spot at 9d. per oz.

SHELLAC.—On the spot *Button* lac has been in some request, but only a small business has been done in this variety, on account of the firmness of holders. In other kinds, also, there has been some little business at rather higher rates. For arrival 500 cases *second Orange* (TN) were reported sold on Tuesday, at 92s. c.i.f. terms January-March shipment.

LIVERPOOL.

CASTOR OIL.—There has been a heavy arrival, and value is slightly easier—about 2 $\frac{1}{2}$ d. to 2 $\frac{1}{16}$ d. for good seconds, Calcutta. First pressure French firmly held at 2 $\frac{1}{2}$ d.

FENUGREEK SEED.—10l. is asked for fine Megadore to arrive.

GUM ARABIC.—The market is steady. *Egyptian Talca* has sold at slightly lower figures. *Amrad* is wanting. *Niger* is held at full prices, notwithstanding the late large arrivals.

IPECACUANHA.—Some fine root of the Carthagena description has realised 6s. per lb.

SPERMACETTI.—Value 1s. 4 $\frac{1}{2}$ d. to 1s. 5d.

WAX (BEES').—Fine *Chilian* realised 7l. 5s.

FIRE.—The Bottle Seal Company's premises in Eagle Wharf Road, Hoxton, were destroyed by fire on Wednesday morning last. Subsequently the fire seized upon the extensive works of Messrs. Barnet & Foster adjoining, and the latest information received was that this factory was well alight.

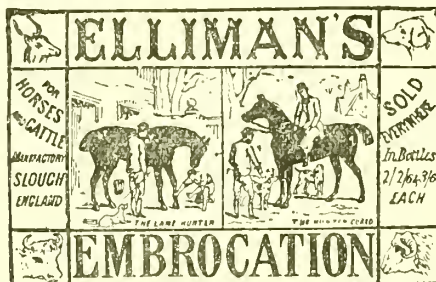
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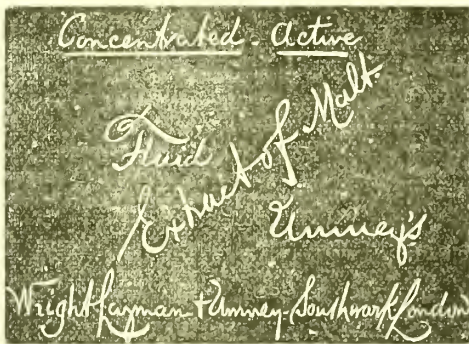
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PURE CRUSHED LINSEED	18/	1 cwt. carriage paid; ✕ 7. 14 & 28 lbs. free on rail Lond.
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EIGHTEEN HUNDRED AND
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THE year now closing is to be known in pharmaceutical history as the Jubilee year. It was a duty, and not less a pleasure, last spring to look back and collect such fragments of our records as were available in illustration of the period when chemists and druggists first began to organise themselves. The principal lesson which the retrospect afforded was, we believe, one of hearty respect for our ancestors. We came to the conclusion that if, as we think, the general body of pharmacists has advanced to a higher level, propelled to it mainly by the compulsion of the law, our best men are not

individually much superior to the champions of the trade half-a-century ago. If this reflection is a little depressing it may not be equally unwholesome. It may, at least, encourage modesty, and should provoke each to push forward in his own sphere, so as to obtain, if possible, a more secure footing and a wider breathing-space for our successors of fifty years hence than we now enjoy.

THE PHARMACY BILL OF 1891.

It was at one time hoped by some that the actual date of the Jubilee of the Pharmaceutical Society might have coincided with the second reading of the Pharmacy Bill, of which so much was heard a year ago. That Bill was introduced into the House of Commons on March 20 by Sir Henry Roscoe, and its second reading was put down for April 15. But this event was postponed from time to time, and the Bill was ultimately dropped in June. In its actual official career the Bill excited but little interest, and was promoted with no energy. The Bill made provision for a compulsory curriculum, for a division of the qualifying examination, for the admission of persons who had passed the Minor examination to the Pharmaceutical Society as members, for the limitation of the right to compound medical prescriptions to qualified persons, and for the exemption of all chemists and druggists from jury-service. No attempt was made to provide against the frequently-recurring evasion of the Pharmacy Act by unqualified persons forming themselves into joint-stock companies; and it was the incomprehensible refusal of the Council of the Pharmaceutical Society to deal with this difficulty that deprived them of a large volume of trade sympathy. Opposition to the Bill was organised on behalf of herbalists, of shopkeeping doctors who employed unqualified assistants, and of the unqualified assistants themselves. It was evident that a Bill making any trade advance could only be carried if supported ardently by chemists and druggists generally, and it is to be hoped that the Pharmaceutical Council has discovered by this time that such support can only be won by the manifestation of a little more respect for opinions which prevail in the regions outside Bloomsbury Square.

Although their Bill was a fiasco the Pharmaceutical Society have secured important advantages by obtaining the sanction of the Privy Council to their

REVISED BY-LAWS.

We pointed out in detail, only a week since, the alterations to be effected by these by-laws, the most important, in our estimation, being the addition of an acquaintance with the laws governing the sales of poisons, and an increase of two guineas on the examination-fees payable on qualification as a chemist and druggist. This means a substantial improvement of the Society's financial condition, which its Treasurer properly declared to be unsound in the early part of the year.

Besides the important work of establishing these by-laws, and making some improvements in the method of conducting the examinations

THE PHARMACEUTICAL SOCIETY

has not been active in innovation. The only change in the *personnel* of the Council has been the substitution of Mr. Warren, of Russell Street, Covent Garden, in place of Mr. N. H. Martin, of Newcastle, who resigned in January. At the election in May Messrs. Spink and Botwood were candidates against the retiring members, but neither succeeded in capturing a seat. The Council has prosecuted the unqualified assistants of several stores, and has obtained judgments for rather heavy amounts. We have had occasion to show

that when these suits were undertaken a member of the Council was himself employing an unqualified assistant to manage a branch business, and the course taken by the Council in enforcing the judgment of the High Court against store-assistants only, though satisfactory from a tactical point of view, is hardly to be commended as a specimen of even-handed justice. It may have had some influence, however, in limiting the incorporation of unqualified persons into

CHEMIST AND DRUGGIST COMPANIES,

of which we have this year reported seventeen to have been registered, as against twenty in the previous year. The system goes on, however, and the higher cost and possibly increased stringency of the Minor examination must have the effect of encouraging it. Qualification by registration at Somerset House is the greatest danger threatening the future of British pharmacy and the prosperity of British pharmacists, and it is astonishing that those to whom is entrusted the guidance of pharmaceutical affairs should persist in ignoring it when they are drafting Bills for submission to Parliament. In regard to

POISONOUS PATENT MEDICINES,

the Council is, as it appears to us, wise in awaiting outside pressure. This seems to be now coming. The Parliamentary Committee of the British Medical Association is taking up the matter, and has brought under the notice of the Solicitor to the Treasury the risks attending the free sale of morphia and other poisons in nostrum form, and it is likely that some action will shortly result.

THE COUNCIL OF THE IRISH PHARMACEUTICAL SOCIETY has been busy in fulfilling the requirements of the Act of 1890, and, in spite of a few criticisms, would seem to have admitted to registration as druggists all persons who could show anything like a reasonable claim. The new condition of affairs has strengthened the Society numerically and financially, and they have been able to buy and fit up excellent premises of their own in Dublin. We have the satisfaction of adding that from the beginning of next year this journal is to be officially supplied to every member and associate of the Society.

THE CAPE COLONY PHARMACY ACT,

of which we gave a summary recently, is the most striking item of pharmaceutical legislation outside this country during the year.

The border-line between the administrative and the practical in chemistry and pharmacy has during the past year widened to greater than usual proportions in

JUBILEE CELEBRATIONS.

The foundation of the Chemical Society of London and of the Pharmaceutical Society of Great Britain within three months of each other, early in 1841, and the completion of fifty years' existence in each case, became of international importance when each Society set about the celebration of the events. In February of the present year the Chemical Society had the good fortune to receive the congratulations of some of the most eminent men in this country, and of several famous living foreign chemists, on its work of fifty years. At that time, and for several months afterwards, the Society had to deal with a revolt of a section of its members against an alleged laxity in admitting fellows, but this circumstance was not allowed to detract from the dignity of the Jubilee celebration, which was altogether fitting for the occasion. A very successful attempt was made to illustrate

the progress of chemistry from 1841 to 1891 by an exhibition of chemical apparatus and products at the *soirée* held in Goldsmiths' Hall, and the brilliant assemblage then present testified to the position of respect which the Society has attained. The Jubilee of the Pharmaceutical Society properly fell on April 15, but it was not until a month later, and in conjunction with the annual meeting, that it was officially celebrated. From all parts of the world, in response to invitations, the Society received congratulations, and a large number of foreign pharmacists participated in the festivities that were arranged. These events are so fully recorded in our first volume for the year that we need only now recall the fact that in connection with them there were published in this journal portraits of all the past Presidents of the Pharmaceutical Society, and of most of the original members then living, and special articles by those who had personal knowledge of the events of half-a-century ago. It was a happy circumstance that the biennial presentation of the

HANBURY MEDAL

coincided with the Jubilee celebration. On the present occasion it was bestowed upon a distinguished German, Dr. Julius Oswald Hesse, whose researches on the active principles of drugs—especially the alkaloids of cinchona, belladonna, opium, and coca—entitled him to the high distinction. This event supplies us with the link to the

LITERATURE OF THE YEAR.

for, in accordance with German custom, Dr. Hesse presented the President of the Society with a thesis on the constituents of coca at the moment when he received the medal. This thesis was a valuable *resumé* of our knowledge of the constituents of coca up to date in every respect. Dr. Hesse not only showed the constituent differences between the natural varieties of coca, but the effect of cultivation upon these constituents. He showed that coca-leaves contain several bases, of which cocaine, though the most valuable, is not always the chief, cocamine being a constituent of natural leaves, and cinnamyl ecgonine methylester a peculiar base of the cultivated leaves, which have to be reckoned with as impurities of the more valuable alkaloid—cocaine. Not the least valuable part of the paper was that in which the author dealt with the properties of cocaine and its salts, wherein he showed that the hydrochloride crystallises with two molecules of water. He also described the various acids which are associated with the bases in the drug, and denied the existence of the volatile principle hygrine, except as a derivative. Many of the statements contained in the paper were afterwards the subject of controversy between Professor Liebermann and Dr. Hesse, the former maintaining the correctness of his observations regarding isotropyl-cocaine and hygrine.

Amongst other alkaloids which have received attention during the year

ACONITINE

ranks first. We published in February a paper by Mr. F. A. Rogers and the late Mr. E. Richards on the aconites and aconitines, in which the authors brought forward further testimony to their previous statements regarding the cultivated varieties of aconite, and added an account of their researches on the isolation and purification of crystalline aconitine. Some really honest work was shown in this article, and the authors professed to have exalted the potency of aconitine by obtaining from the nitrate of the alkaloid an isomeric body about six times more toxic than the crystallised aconitine of commerce. They also stated that the molecule contains two atoms of nitrogen, instead of one as generally assumed. While their research undoubtedly showed

much painstaking care, their arguments were not altogether convincing, as Mr. T. B. Groves afterwards pointed out, and there was some expectation that the Research Laboratory of the Pharmaceutical Society, with the resources at its command, of a more complete nature than private workers can obtain, would attack the problem more efficiently. The expectation is not yet fulfilled, for the research is still in progress. The first part of the report was communicated to the Chemical Society in March, and it was chiefly remarkable for its corroboration of the observations made many years ago by Dr. Alder Wright and his associates. The value of the observations has occasionally been questioned—indeed, the uncertainty about them was the only reason which justified the Research Laboratory taking the matter up; but, in the main, the correctness of Dr. Wright's researches is established.

ANOTHER ACONITINE PAPER

was communicated to the British Pharmaceutical Conference by Mr. A. H. Allen. This dealt with the assay of aconitine, and depended upon the saponification of the alkaloid, whereby benzoic acid is formed, and may be isolated and directly titrated. This paper and the demonstration of the process were among the interesting things of the Conference meeting, but Mr. J. C. Umney questioned the value of the method, alleging that an amorphous body is associated with aconitine, which is inert, and also yields benzoic acid; therefore, he argued, the process is valueless. Quite recently Mr. Allen has replied to Mr. Umney's criticism, pointing out that the existence of the amorphous inert body is more than doubtful, and that it has never been isolated in sufficient quantity to justify Mr. Umney's criticism. It would appear, from the work done in the Research Laboratory, that absolutely pure aconitine is only obtainable in research. That work does not profess to say that, on the commercial scale, aconitine can be produced as pure, and at a price sufficiently moderate to permit its use in medicine. That being so, it is probable that Mr. Allen's method of assay is sound for medicinal aconitine, although it may require modification when our knowledge of aconitine is extended, and it has the great advantage over Wright's in enabling the worker to use small quantities with more certainty of accurate results.

THE PHARMACOPŒIA ADDITIONS

were the subject of considerable criticism in the early part of the year, the formula for *mistura olei ricini* especially coming in for much adverse comment. Mr. Conroy led this off in a note communicated to this journal. Few on this side of the Irish Channel were aware that the mixture was an old Irish favourite, and that its introduction into the Pharmacopœia was due to Dr. Macnamara, the editor of Neligan's "Medicine." As soon as that fact came to be known, criticism began to wane. A useful contribution to the criticism of the additions generally was made by the North British Branch, and the Supplement to Squire's "Companion" was brim full of suggestions and comment upon the details of manufacturing and testing. We had occasion to point out in connection with the publication of the "Additions" that it is not authoritative, nor can it be until incorporated in the British Pharmacopœia. Professor Atfield's report for 1890, on the Pharmacopœia, was largely confined to the subject of

SYNONYMS.

The professor has interpreted a personal demand for more synonyms as being of great importance to the drug trade, and in his report put forward what he thought might, in the first instance, be considered by the trade. To that he

added a lengthy and interesting historic sketch of sulphur precipitatum and lac sulphuris, the object being to get these terms and their English equivalents applicable only to one article—viz, the non-calcareous precipitated sulphur. The trade has given very little attention to the matter—far too little considering the issues involved in the introduction of this or other synonyms. There is a good deal of confidence reposed in Professor Attfield, and he doubtless in that knowledge will move cautiously in regard to innovations. Apart from that, we have submitted that any attempt to make the British Pharmacopœia an official trading standard, as well as the standard for medical prescriptions, entitles pharmacists to equal rights with medical men in compiling the Pharmacopœia. That the interest of pharmacists in the Pharmacopœia has increased since Professor Attfield's appointment as reporter is evident from the greater attention given by pharmacists to reinvestigation of pharmacopœial subjects. Thus in regard to

TINCTURES

the work of Messrs. Farr and Wright will have an important bearing upon the official formulæ, as they have been able to show that the menstrua may with advantage be modified in some cases, and the methods of working also changed. This investigation is not yet complete, and the results require to be presented in concise form, which may be done at the next meeting of the Pharmaceutical Conference. There have been many other investigations of minor importance during the year; but, on the whole, none which are likely to rank as classic.

THE CONFERENCE MEETING AT CARDIFF

was a good proof of this assertion. In every respect the meeting was an interesting and profitable one; the presidential address was up to the high-water mark; the papers were interesting and the discussions good, but there was nothing about the meeting to excite enthusiasm. Mr. Cripps has commenced a research on ipecacuanha under Conference auspices, and has laid the foundation; Mr. Gerrard has continued his observations on henbane, showing that some foreign samples of the leaf are bad; Mr. Conroy read notes on B.P. euonymin and the stiffening of extracts, both of which were of practical value, although Mr. P. W. Squire was afterwards able to show that he had anticipated Mr. Conroy in his suggestion to use calcined magnesia instead of milk sugar for keeping dry extract of euonymin in powder form. Mr. Allen's Cardiff paper on aconite we have already mentioned. Amongst others of value were Mr. Hodgkin's paper pointing out that glacial phosphoric acid is a mixture of metaphosphoric acid and metaphosphate of ammonium or sodium. It is impossible to get glacial acid without a metaphosphate; and, of the two, preference is given to the ammonium salt. In a paper on eucalyptus oil Mr. R. H. Davies brought our knowledge of the oils of commerce up to date showing, that the oil of *E. oleosa*, &c., contains eucalyptol, and may be ranked with *E. globulus* oil. Mr. John Moss communicated results of experiments on cascara sagrada, which proved that a more effective preparation than the B.P. fluid extract can be made with proof spirit. Mr. Burroughs showed how castor oil can be rendered practically tasteless by incorporating with malt extract; and Mr. F. Davis called attention to the great variability in the strength and size of medicinal lozenges as sold to druggists.

PHARMACEUTICAL MEETINGS

have fallen somewhat flat, and the necessity for them as a means of publishing new discoveries has greatly diminished, if not disappeared. Last winter the meetings at Bloomsbury

Square were somewhat scratchy, and only one communication came from the Research Laboratory—viz, that on the sugar of eucalyptus honey, by Dr. F. W. Passmore. The same evening Mr. John Moss read a controversial note on gynecardic acid; and Professor Traill, of Aberdeen, spoke on the growth of galls. At the March meeting Mr. Holmes read a paper on ambiguities of nomenclature, Mr. H. G. Greenish following with a histological note on the root of *Phlox Carolina*, a substitute for Indian pink (*Spigelia*). Surgeon Parke was to have told the April meeting all about the African dwarfs' arrow-poison, but, in his absence, Mr. Holmes read his paper, and it was followed by one on oil of citronella by Mr. J. C. Umney. This winter the Society has abandoned the usual form of meeting for lectures on special subjects. One result of this departure has been to shelve the curator's comments on donations to the museum. These were always interesting, and attracted to the meetings commercial men, who in other circumstances stay at home. As the last evening of the season is unoccupied, the curator should have a thoroughly good innings on that night. The Society had only two meetings in Edinburgh (January and February), the Pharmacopœia additions taking up the greater part of the time. The present session of the North British Branch was opened by Professor Bayley Balfour, who spoke of the work of Kew, and delighted his audience. Good work continues to be done by the various

PROVINCIAL AND ASSISTANTS' ASSOCIATIONS;

indeed, they are doing much of what has hitherto been done by the Pharmaceutical Society, and are more effectively creating friendly feeling in the trade. It is in this department rather than in advanced research that these associations have their strength, and it is pleasing to notice that this fact is getting to be more appreciated in provincial centres.

A WIDER VIEW

of the pharmacy of 1891 reveals considerable activity in the synthetic medicine department, but with only a few substantial additions to *materia medica*. Investigators appear not to be able to get beyond antipyrin and iodoform. Fortune has followed the former, and that lures on other fortune-hunters to improve upon it. A new process for the manufacture of this antipyretic was patented in Germany early in the year, but little has been heard of it since. More important advances have been made in the study of derivatives of antipyrin, the most important of these being salipyrin, a salicylate of antipyrin, whose discovery scarcely falls within the present year, but its therapeutic use has practically commenced now, and it promises to be a valuable agent in the treatment of acute rheumatism. The phenyl group in the antipyrin molecule provides investigators with an excellent means of altering the properties of the body without materially affecting the structure of the molecule. Upon this principle such bodies as iodopyrin and resopyrin have been prepared, iodine in the former case taking the place of a hydrogen atom, and the resorcin group doing the same thing in the latter, the result being bodies which, as in the case of salipyrin, exhibit the therapeutic properties of the constituents in a more marked manner than mere mixtures. The only distinctly new antipyretic which has taken a hold is

PHENOCOLL,

a substance of the phenacetin class, prepared by the interaction of glyccoll and phenctidin. The hydrochloride of the base is used in medicine as an anti-neuralgic and anti-rheumatic. It possesses the power of lowering the temperature, and has the advantage over phenacetin of being soluble

in water, while it has not the disadvantage, which antipyrin possesses, of affecting the heart. In association with piperazine it is also used in the treatment of gout and rheumatism. Synthetic remedies are also brought forward from time to time for the

TREATMENT OF CONSUMPTION.

the most notable of these being benzozol, a compound prepared by acting upon guaiacol with benzoyl-chloride, whereby a hydrogen atom in the guaiacol molecule is substituted by a benzoyl group, the result being a white and almost tasteless solid which splits up in the system into guaiacol and benzoic acid, thus providing the creosote treatment without its disagreeable accompaniments. As matters stand at present, this method of treating phthisis is the only modern one which holds its own. When the year dawned,

KOCH'S CURE

was at its zenith, and Berlin was full of hopeful and dying consumptives. Week by week it became apparent that the power of the remedy had been flagrantly exaggerated. Deaths from its administration in pulmonary tuberculosis became frequent, and Koch's disciples retracted so far as to say that external tuberculosis (lupus) and tuberculosis of the bones were the diseases which it would cure; but that refuge also failed, and it becomes merely a valuable diagnostic agent. Yet about this we have conflicting statements. A Government commission in this country has found in the case of animals—cows chiefly—that tuberculin failed to diagnose tuberculosis in true subjects of that disease, while it produced the diagnostic symptoms, and even the disease, in animals free from it. In France a commission has come to the opposite conclusion. We have not had in modern times a remedy which has created so much enthusiasm amongst all classes in all parts of the world, and especially amongst medical men, which has collapsed so quickly and deservedly as this tuberculin of Koch. He thought fit to keep the method of preparing the tuberculin a secret, and, until a few months ago, it remained in essence a proprietary and high-priced article, the reason given for secrecy being that skill and care are required to regulate the strength of the extract and to keep it germ-free. Unfortunately, tuberculosis bacilli were found in it now and then, showing that the pretended skill and care were somewhat wanting, and that a dangerous article was turned out. Analysis also showed the preparation to be simply a filtered glycerine solution of tubercle cultivations, with albumoses and all the other poisons which the bacillus is capable of producing, in a terrible *misch-masch* and absolutely unstandardised. The publication by Dr. Koch of the method of preparation proved the truth of these observations, and that there was no sound scientific reason for keeping the method of preparation secret. So the remedy is moribund at present, and is likely to remain so.

OTHER CURES

there were which have gone the same road—amongst them Liebreich's injections of a solution of cantharidinate of sodium, and various French suggestions depending upon the transfusion of the blood of non-tuberculous animals into the veins of the phthisical; but nothing of practical importance has come of all these struggles for popularity, and that, after all, is what most of the proposals seem to aim at.

IN PURE SCIENCE

there have been few discoveries of high importance directly interesting to chemists. On the occasion of the celebration of the centenary of the birth of Michael Faraday, Professor

Dewar was able to condense and liquefy oxygen before the eyes of a Royal Institution audience, a feat not hitherto achieved in so public a manner. This chemist continues his investigations on the properties of gases in a liquefied state, and quite recently he found that a little oxygen placed between the poles of an electro-magnet was at once attracted by the latter, adhering to the poles until it evaporated. Raoul Pictet, the Swiss chemist, who has done so much in the same branch of research, has, during the year, turned his attention to the

SOLIDIFICATION OF CHLOROFORM

with the object of freeing it from impurities by crystallisation, and in this it is reported that he has succeeded so far that the final product is so pure that it does not decompose quickly in sunlight. The evidence adduced is not, however, sufficient; and, until the chloroform purified by crystallisation is placed on the market in competition with other forms, we cannot judge of its value. It is noteworthy that publicity was given to the discovery at a time when deaths from chloroform-poisoning were happening with alarming frequency in this country, and were unjustly attributed to the impurity of the chloroform used. There is ample evidence that the mode of administering the anæsthetic and the selection of patients are not altogether satisfactory. On the other hand the chloroform has only in one case been found to be sensibly impure, as we had occasion to note last week. The question of the administration of anæsthetics was discussed by the therapeutic section of the

BRITISH MEDICAL ASSOCIATION.

Dr. Lauder Brunton opening the discussion, but there was little new added to what the Hyderabad Commission put on record. Chloroform-poisoning is practically asphyxia, and that is what the administrators have to avoid. The meeting of the Association at Bournemouth was very successful, all the sections showing vigorous vitality, and none more vigorous than the annual museum, which was again well supported by the leading makers of medicinal specialities and surgical dressings, &c. Turning again to

PRACTICAL PHARMACY,

we find, on glancing through the index of the present volume and that of the last, that, beyond the papers which have previously been mentioned, there are few which can be placed in the first rank for excellence. It has been a year of small but profitable and useful things. A year for the ventilation of points of practice by correspondence; actually 211 of the 1,864 pages which constitute the literary matter of *THE CHEMIST AND DRUGGIST*, 1891, are contributed by the trade on trade and professional subjects. This including from thirty to seventy replies per week to various questions and problems submitted to us. Necessarily there is much in correspondence of this kind which is of educational value, but, apart from that, so open a means of influencing opinion and propagating reforms is bound to be of immense value to the trade. We have already mentioned a few of the original articles on practical subjects which have been communicated to this journal in the course of the year. Later we refer to some of the new drugs which have been noticed in our columns. Before closing this section reference should be made to the new formulæ (nine in all) issued by the Pharmaceutical Conference, and to the

CHANGES IN THE PHARMACEUTICAL EXAMINATIONS.

These are threefold—(1) the introduction in August of the schedules for the Minor and Major agreed upon a year ago: (2) the by-law proposals to add to the Minor a knowledge of

poison laws and two guineas more for fee, and to reduce the Major to two or more subjects and a three-guinea fee; (3) a resolution by the Pharmaceutical Council in November to extend the Minor examination over two days—the first in practical chemistry and pharmacy, and the second an oral examination in the rest of the subjects, the Major being made written and practical, with an oral examination in exceptional cases. Unquestionably the alterations should be of immense benefit to future chemists and druggists. Meanwhile an attempt to raise the standard of the Preliminary examination has ineffectually been made.

COMMERCIAL.

It is nearly sixty years ago since Carlyle, writing on the influence of man's actions upon his fellow-man, put these words into the mouth of Professor Teufelsdröckh: "... the finer nervous circulation, by which all things, the minutest that he does, minutely influence all men ... all this you cannot see, but only imagine. I say there is not a red Indian, hunting by Lake Winnipic, can quarrel with his Squaw, but the whole world must smart for it: will not the price of beaver rise? It is a mathematical fact that the casting of this pebble from my hand alters the centre of gravity of the universe." That thought, being a simple expression of fact, remains just as true to-day as it was in 1835, but the growth of intercommunication between all nations of the world, and the increased dependence of every individual upon his fellows which the breaking down of natural obstacles has carried with it, renders its truth much more easily understood. And if we commence our review of the commercial history of the year (or rather of those incidents in it which have exerted the most perceptible influence upon the trades of which this journal is the exponent) with a reference to the interdependence of all beings, it is because that interdependence has been made manifest in all parts of the globe with unusual clearness during the year now drawing to its close.

CUSTOMS TARIFFS.

The enactment of the McKinley laws, part of which only came into operation in the spring of 1891, is directly responsible for most of the continental tariff legislation which is absorbing so large a share of public attention at the present time. In the States, the McKinley Acts have by no means settled into a smooth working groove as yet. Hardly a week passes but disputes arise between importers and Customs authorities concerning the meaning of some clause or another in the Acts. One of the most glaring examples of the looseness with which the tariff mesh (perhaps designedly) has been woven, was afforded only a few weeks ago, when it was discovered that under one section of the Tariff Act the heavy duty upon cocaine, apparently imposed by another section, could be practically circumvented—a discovery of which importers were not slow to avail themselves. A measure somewhat resembling our own Merchandise Marks Act, inasmuch as it obliges all articles, the nature of which permits them to be stamped or marked, to be provided with an indication in English, showing the country of their origin, came into force in the United States on March 1. It is a law of no mean importance, but in the general hubbub of occurrences of more "sensational" interest has been almost overlooked.

SOUTH AMERICA AND AUSTRALIA.

The South American markets have generally been in such a condition of disturbance that most of them may, for the present, be looked upon as even more than usually unsafe for commercial operations involving the granting of

credit. Barring a few minor modifications of tariff, the Australasian trade has not, this year, been affected by any special legislation, although in the domestic affairs of several of the colonies incidents have taken place which must have exercised an unfavourable influence upon the trade relations between England and Australasia. The labours of the Australian Federation Commission, which met in Sydney on March 2, though productive of a general agreement among the delegates, have not met with sufficient sympathy in the various legislatures of the Continent to lead to any immediate further action. In the course of time, however, Australian federation is sure to be accomplished, and, if the opinions expressed at the Sydney Conference afford any clue to its conditions, increased Customs duties upon non-Australian goods may be confidently looked for among its first-fruits. The Canadians have also played a part in the international commercial drama this year by refusing, on March 5 last, to sanction a policy which would have been equivalent to commercial union with the United States. But although that policy has received a temporary, if not final, rebuff, England has not obtained from its rejection the benefit which it was at one time hoped she might reap.

THE UNITED KINGDOM.

For the trade of this country generally 1891 has not so far been so favourable a year as its predecessor—that is, if we judge the prosperity of a year by its commercial statistics. For the full tale we shall have to wait a while, but the eleven months ending November 30 show a decrease in our national exports more than equal to the increase of 1890 (a red-letter year in trade) upon 1889. During these eleven months we exported, in round figures, 227½ million pounds in 1891, 242 millions in 1890, and 228 millions in 1889. Our imports, on the other hand, are larger than ever. For the eleven months in question they have been: in 1891, 392½ millions pounds, in 1890 381½ millions, and in 1889 389½ millions. Last month's imports of foreign goods were, we believe, the largest on record in the history of our commerce.

THE CUSTOMS TREATIES.

The centre of interest in commercial legislation has been transferred this year from America to Europe. Of the effect of the Customs treaties which are now in process of conversion into law in various continental legislatures it is impossible to draw detailed conclusions as yet. It is certain that the treaties between Germany on the one hand, and Austria, Italy and Belgium on the other, have been inspired much less by the desire of the rulers of Germany to revert to a Free-trade policy than by the pressing necessity to afford the population of Germany some relief from the scarcity and dearness of food that were becoming intolerable. By virtue of our existing treaties with all the parties concerned in the Tariff Convention, Great Britain will benefit by all the reductions in duty granted by the respective States to each other; but as the principal articles upon which the tariffs have been lessened are either cereals—which we do not export at all—or such manufactured goods as are the specialities of the countries immediately concerned in the treaties, it is not likely that the United Kingdom will gain much in her export trade from the new departure. What gains she does make will probably be obtained in Italy and Austria, rather than in Germany or Belgium. From Russia it seems hopeless to expect any concessions in the way of Customs duties. For good or evil that Empire stands committed to a course of commercial legislation which isolates her more and more. On the other side of Europe, France seems to be inclined to follow her example. The original draft of the French tariff, which is now under

debate in the Chamber, established an average increase of 24 per cent. upon the Customs duties, and it has since been revised by the Senate in the direction of further increase. How British exports to France have dwindled since the conversion of the Republic to Protection is shown by the simple fact that in 1881 France bought 28,104,000*l.* of British produce, in 1891 only 21,532,000*l.* The Minimum Tariff, which embodies the best terms that we can get extended to us if the new Tariff Bill passes, is so high that it will not be worth our while to consider France any longer if we can gain anything by altering our wine-duties to suit other nations. So much for the tariffs, though it should be mentioned in this connection that on July 1 the important ports of Trieste and Fiume, which occupied a position in the Austrian Monarchy somewhat analogous to that of the Hanse Towns before their absorption into the German Customs Union, were assimilated (not without protests on their part) into the Austro-Hungarian commercial system.

TIME BARGAINS.

Early in the present year a largely-signed petition was presented to the German Parliament asking for legislation against the system of terminal trading, which is so widely prevalent in that country. Since then the matter has been more or less quiescent, but, now that the Reichstag is once more in session, rumours of impending legislation against speculative trading are again reviving. In this country the system represented by the London Produce Clearing House appears to have struck congenial soil, and time-bargains have now become an acknowledged institution in several of the leading branches of the produce trade. That the system of "regulated speculation" is indefensible on ethical grounds, and therefore necessarily harmful in practice, hardly requires demonstration. It would be a matter for congratulation to see it uprooted; but it might not be found an easy task to frame and carry legislation that would effectually eradicate it.

THE UNITED ALKALI COMPANY.

The principal feature of the British alkali industry in 1891 has been the consolidation and extension of the United Alkali Company. Like its prototype the Salt Union (which, by the way, has been less successful than its originators wished us to believe it would be), the Alkali Union entered upon its career with a strength of capital, plant and organisation greatly in excess of that of all the competitors who had preserved their independence. At a meeting held shortly after the starting of the organisation the chairman enumerated, with a pride as of Xerxes reviewing his battalions in battle array, the strength of the company's forces. They had sixty locomotives and 2,000 waggons, an armada of ninety-six vessels, and they produced, of the four leading chemicals, an aggregate of 565,000 tons, or 83 per cent. of the estimated output of the whole country. Of the results of the United Alkali Company's labours, so far as its shareholders are concerned, no positive account can yet be given; but it may be asserted, without fear of disproof, that the chemical trade as a whole has no reason to bless the existence of the huge combination. The prices of most of the leading chemicals manufactured by the company have been increased, the services of middlemen have been dispensed with wherever possible, and the company generally shows a decided tendency to rule with a strong hand. Its relations with its employés, moreover, have not been uniformly happy. One of the most fearful accidents of the year occurred at one of the company's factories—at Friars' Goose. In the summer a threatened strike among the operatives at St. Helens was but just averted, and since then a series of articles has been

published in a workman's journal which sheds a somewhat lurid light upon the unsatisfactory conditions under which the manufacture of the staple articles of chemical industry is carried on. At present it appears as if the Union will soon have to contend with competition from various new quarters, among which a works, said to be now in course of erection at Newcastle-on-Tyne for the manufacture of alkali by Davies' process, may be specially mentioned. It is asserted that under that process it will be possible to manufacture a ton of bleaching-powder from $\frac{3}{4}$ ton of salt, whereas under the Union's Weldon process it requires $2\frac{1}{2}$ tons of salt to produce a ton of bleach.

COMBINATIONS.

The "combination" movement which was so prominent an event in the commercial history of recent years has shown some slight signs of abatement in 1891. In the drug trade, at any rate, no new conventions have been successfully organised, but in some cases negotiations which at one time appeared likely to lead to the accomplishment of combinations have finally broken down. The combination which had existed for some considerable time among the German manufacturers of permanganate of potassium broke down early in the year, and the makers at once commenced to undersell each other. On October 15, however, the few makers who still continued to prepare the article (the unremunerative prices having driven several of them away from the trade) turned over the whole of their preparation to one of their number, and it may, therefore, be said that since then a virtual monopoly has been re-established. The acetate-of-lead convention, which was concluded in Germany on October 1, and which resulted in the immediate advance of the price of sugar of lead by 30*s.* per ton, was rather the renewal of an old organisation (after a short interregnum) than the creation of a new one.

THE PROJECTED QUININE SYNDICATE.

The efforts to establish a cinchona syndicate appear to have died a natural death, and the topic has hardly been heard of this year. The ever-projected but never-accomplished quinine syndicate, on the other hand, has made several sea-serpent like appearances in the course of 1891, and, upon various occasions, afforded a welcome subject for discussion. It turned up quite early in the year in the wake of a representative of an American quinine factory, who convened meetings of his European colleagues in Paris and London and actually succeeded in pushing matters so far as the signing of one or more preliminary memoranda. But whatever prospects of success the scheme might have enclosed were sterilised by the absolute refusal of one of the German factories to have anything to do with the convention. Shortly afterwards, a communication from a rival German factory to its customers lifted a corner of the veil of secrecy with which the negotiations had been surrounded; these revelations called forth remonstrances and further disclosures from the factory which had refused its adhesion to the project, and in this manner the principal points in the negotiations became public property.

When the quinine planters heard of the negotiations they naturally became alarmed. It was intended, it is true, in the draft scheme, to include them—had they willed it—in the organisation, but the prospect of being placed under permanent bondage to the manufacturers, instead of themselves controlling the markets, had no attraction whatever for them. Hence the questions of the possibility of forming a strong union among the Java planters—for Java has this year definitely and strongly taken the lead of the bark market—and of the establishment of a quinine factory in the island,

thus rendering the growers quite independent of the European quinine makers, again became of immediate interest.

QUININE MANUFACTURE IN JAVA.

The principal association of Java planters, at their meeting in May, passed a resolution asking for Government assistance for the purpose of establishing a quinine factory in the island, and also censured the policy of two Java planters who have made contracts for the direct supply of a German factory upon terms which are considered injurious to the general interest of the growers. Since then it has been decided that the assistant director of the Java Government plantations shall visit British India (where a Government quinine factory is in active working order), for the purpose of obtaining information. It is somewhat remarkable that, shortly afterwards, in July, the Wynaad Planters' Association of India petitioned the Indian Government to despatch Mr. Lawson, the Government Quinologist, to Java, with the object of studying the cultivation of cinchona in that island. There does not appear to be any immediate prospect of the establishment of a union of Java cinchona-planters, nor of the erection of a quinine-factory in the island; nevertheless, it is clear that the leading Java planters are quite conscious of the strength of their position, since they have elbowed Ceylon out of the first place in the cinchona industry. Some months ago it was estimated that the total cinchona production of Java in 1891 would equal 4,830,000 oz. sulphate of quinine; in 1892, 5,340,000 oz.; and in 1893, 5,490,000 oz. Since that time the bark shipments from Java have been so heavy that the estimate for this year is likely to be largely exceeded. The position of well-managed cinchona estates in Java, moreover, despite the low unit, is by no means so unfavourable as might be imagined. Several of them have declared from 8 to 11 per cent. dividend for 1890-91; and it is confidently asserted that a well-conducted estate, producing bark averaging $4\frac{1}{2}$ per cent. from seven-year-old trees, can pay 10 per cent. with the unit at $1\frac{1}{2}$, and with nine-year-old trees and 5 per cent. bark can yield the same dividend even with a $\frac{3}{4}$ d. per lb. unit. These figures should be borne in mind in studying the prospects of quinine. In connection with the cinchona market it may further be mentioned that, in September, the export duty upon cinchona from Ceylon was reduced from 20 to 5 (rupee) cents, and that, last month, measures were taken to improve the system of sampling cinchona for manufacturing purposes in Amsterdam. The West Coast of Africa has sent us larger bark supplies this year than in any previous season, while the island of Jamaica appears to have entirely ceased to count as a cinchona-producing country.

SYNTHETIC PREPARATIONS.

The "artificial quinine" bogie has been allowed an almost complete rest this year—except, perhaps, for some slight stirring of its bones in April last, when two French chemists of reputation published a paper announcing that they had succeeded in manufacturing artificial quinine from cupreine; or, rather, in converting into quinine an alkaloid peculiar to the *Remijia* bark—the comparatively obscure cupreine. Commercially the discovery is at present worthless, as it is tainted by the same fatal flaw which prevents the discovery of the synthesis of diamonds and indigo from being put into practical operation. That is to say, it is cheaper to produce natural quinine than to make it from cupreine, and so long as the supply of cinchonas holds out, and the cupreas remain, to all intents and purposes inaccessible in their American forest fastnesses, that factor will continue to prevail. The synthetic production of indigo may, perhaps,

in future come before the world again in connection with the reported acquisition, by a German aniline works, of a new process of preparing that dyestuff; but since an announcement, made several months ago, nothing has been heard upon this subject.

The only new synthetic preparation which, this year, has created any practical interest is Tonquinol, a new musk substitute, of a white colour and occurring in small needle-shaped crystals, which was placed upon the market in April. So far its employment appears to be of an exceedingly limited character.

NEW DRUGS.

Among the entirely new drugs, and those previously known but now imported from fresh sources, which have been placed upon our markets in the course of the year, the principal place belongs to refined camphor from Japan. In 1890 already it became known that camphor-refining plant had been forwarded from America to Japan, and about the end of September the first samples of the new product, showing a camphor of great purity, but refined with less skill than the European article, were received in London. Since then there have been consignments of the drug, and it has become known that the principal firms interested in the new venture are certain American chemical manufacturers. In the United States camphor-growing appears to have also been commenced in earnest, and it is said that in April last a consignment of 5,000 young plants was shipped from the Washington botanical gardens to Florida, and that in June, upon another plantation in the same State, the first American grown camphor has actually been distilled. In the beginning of January we received the first shipment of so-called African copaiba balsam, which appears to be a true copaiba, and of which further arrivals have since found their way hither. Patchouly-leaves have also reached us from the African West Coast, and sandal-wood oil distilled in Australia has, for the first time, been seen in European commerce. Aconite-root from Nepaul (from *A. ferox*), of which 77 bags were offered at the drug auctions on June 11, is not quite a new drug, though it had not been seen in the London market for nearly twenty years. A fresh variety of spurious ipecacuanha-root has been received from Brazil. One of the most remarkable drug imports of recent years, and one concerning which there is a good deal of mystery even yet, was a consignment of 136 lbs. ambergris from Tasmania, received here in September. Much new light has been shed upon the sources of the different varieties of benzoin in a paper by a Dutch civil servant in the island of Sumatra, which appeared in our columns on September 26.

IODINE AND BROMINE.

The commercial career of iodine has long been marked by sudden and violent overthrows of established conditions, and by erratic fluctuations in value, which bear a decided resemblance to the political and financial tornadoes which convulse the Continent of its production. But throughout 1891, by great exception, iodine has pursued a placid nine-penny career, much to the satisfaction, no doubt, of all the brokers and manufacturers who are interested in the fickle metalloid. What the New Year will bring forth remains as yet the inscrutable secret of the controllers of the drug.

But, if iodine has failed to give satisfaction to lovers of commercial excitement, no such accusation holds good against bromine. For two years that interesting drug has followed a humdrum career, bound over to quiet behaviour by a convention between the German and the American producers, based upon the principle of the United States for the Americans and the rest of the world for the Germans.

In June the agreement was rudely torn up by an ambitious transatlantic manufacturer, eager, it would seem, to demonstrate the capacity of the American eagle to soar before he can walk. Since then the German and the American manufacturers have carried on intermittent hostilities, in the course of which the price of bromide of potassium, the principal bromine salt, has been reduced in value about 30 per cent. Up to the present time there does not appear to be any prospect of a new agreement. The English mercurial manufacturers had to adopt the offensive against a French competitor in October, and, after a short struggle, in the course of which the prices of mercurials were lowered more than once (in spite of the fact that the quicksilver market was actually rising at the time) the combatants appear to have reached a condition of unratified armistice, the French invader meanwhile remaining upon English soil.

CONFLAGRATIONS.

On September 8 a destructive fire occurred at one of the principal New York drug-warehouses. Large quantities of drugs were consumed by the flames, and the report (which proved greatly exaggerated) that 20,000 cases of shellac had been destroyed caused considerable stir in the London shellac market. Shortly after the New York fire a severe conflagration reduced to ashes several London warehouses, but the loss in drugs on that occasion appears to have been very slight, although considerable quantities of druggeries were destroyed.

DRUG INSPECTION AND THE PERFUME DRAWBACK.

The chemical section of the London Chamber of Commerce showed very little activity in the early part of the year, but since the autumn it has shaken off its lethargy. Among the matters which have engaged its attention was the advisability of the appointment of drug-inspectors at English ports, with the object of preventing the landing of drugs (and, we suppose, articles of food also) below a certain undetermined standard of efficiency. The project, however, proved an utterly impracticable one, and the matter has not been pursued further. A committee has also been appointed to inquire into the possibility of obtaining powers for the compulsory destruction or denaturalisation of admittedly inferior drugs imported into this country after having been refused admittance elsewhere. This question also has been shelved for the present. The section is now busy with the consideration of a scheme under which the drawback on exported alcohol will be extended to perfumers. The negotiations are still incomplete, but there appears ground for supposing that the Revenue will be pressed to allow the few firms who now manufacture perfumes in bond under Customs control to preserve that right, and to extend the drawback scheme to other members of the trade only. We have already urged the unfairness of such a distinction between members of the same body.

EXHIBITIONS—PAST AND TO COME.

There have been no important exhibitions this year at which the drug and chemical trades have figured. The German Exhibition at Earl's Court was a decided failure, and the Naval Exhibition did not afford much opportunity for the display of either drugs or chemicals. For 1892 exhibitions are planned at Kimberley (South Africa), Colombo, and Madrid; the latter, it is said, is to bear a special pharmaceutical character. The Chicago Exhibition will not be opened until 1893; but already the organising commission are hard at work trying to beat up exhibitors. The Society of Arts has been constituted the central office of the Exhibition for the United Kingdom, and is endeavouring

to enlist the good offices of the Chambers of Commerce, although, up to the present, with little success. It will take a good deal of persuasive power to convert English business men to the view that they will do themselves much good by showing their wares upon McKinley's native soil.

CLOVE AND SHELLAC CONTRACTS.

As long ago as August of last year a committee was appointed to draw up a new form of contract for the sale of Zanzibar cloves upon delivery, the contract hitherto in force being found unsuitable. The committee submitted its draft-contract to a meeting of the trade at the Commercial Sale Rooms on March 11. The scheme was adopted, practically without alteration, and came into force on May 1. The new contract strictly defines the quality and quantity of cloves to be tendered in fulfilment of contract, and, in other directions, also blocks up the loopholes existing in the former contracts, and through which it was comparatively easy to escape the fulfilment of obligations in case of an unfavourable market. On November 21 the first clove auctions took place in Zanzibar. It is intended in future to hold regular public sales of cloves at that port. What the effect of those auctions upon the London market will be experience must teach.

Shellac has attracted a good deal of attention this year. Its fluctuations have been considerable, and the fortunes of some of the speculators in the article have been subject to sudden reverses. In March a new system of selling shellac, by which the article was transferred from net terms, three months prompt, to fourteen days, less $2\frac{1}{2}$ per cent. discount, was approved of; but this has just been abolished again and the old terms have been re-established.

MARKET ALTERATIONS.

The principal alterations in the prices of all leading drugs and chemicals have been commented upon in our pages from week to week, and they may, therefore, be dismissed in a few lines here. Alcohol has been high in price throughout the year, and its rise has reacted upon several articles in the preparation of which it plays an important part. Russian cantharides were made the object of an extraordinary speculative movement in March, when Professor Liebreich published his paper on the use of cantharidinate of sodium in consumption. The market advanced from 10*d.* to 4*s.* 6*d.* per lb., but almost as speedily collapsed again. Opium, in spite of an admittedly good crop, has been rising rather strongly during the latter part of the year. Cod-liver oil also advanced as a result of the unfavourable fishing season in Norway. The partial failure of the crops in Tinnevely have caused a serious advance in the price of senna, and ergot of rye, owing to the apparent entire failure of the Russian crop, has trebled its value since the spring. Onbebs, on the other hand, are worth scarcely half the price now at which they stood at the opening of the year. The improvement in the manufacture of glycerine has not been without effect upon the price of that drug. Ambergris has slightly receded from its high quotations, but, in good qualities, still remains scarce and dear. Benzoin gum has been in large supply—at one of the public auctions in January the almost unheard-of quantity of 150 cases Siam gum was offered. Ginger, turmeric, honey and beeswax have been dear throughout the year. Ipecacuanha, in spite of heavy supplies, remains in good demand and sells at high prices. Cinchonin and many other drugs from Southern Europe and North Africa have increased in price considerably, a result of the prolonged winter and the damage occasioned to the spring crops.

In the early part of the year there was a temporary excitement in the citric acid market, but this has been permitted to subside. Quinine has throughout the year been in a neglected condition and closes at the lowest price on record. In camphor, quicksilver mercurials, and antimonial salts there have been several changes, but none calling for special comment.

DEATHS

of eminent pharmacists have been rather unusually numerous during 1891. Among the most familiar on the roll are Messrs. H. B. Brady, of Newcastle; W. Scott Brown, of Manchester; Thomas Hyde Hills, of London; Henry Groves, of Florence; Charles Harvey and W. M. Watts, the wholesale druggists; Richard Raimes, of Edinburgh; Messrs. W. L. Bird, London; Battle, Lincoln; Dresser, York; Cornish, Brighton; John Barnard, one of Jacob Bell's associates; and Mr. J. L. A. Croûpe, of Paris, who had been for some years our French correspondent, and was formerly the editor of *The Druggists' Circular*, of New York. We have reported that two of the chemists we have named—Messrs. W. Scott Brown and Thomas Hyde Hills—left fortunes amounting to between 90,000*l.* and 100,000*l.*

WE shall publish next week a classified epitome of the legal cases of general interest which we have reported during the year.

WILLS OF DECEASED CHEMISTS.

Letters of administration of the personal estate of the late Mr. Thomas Edward Fouraker, chemist, of Exeter, who died on January 29, 1891, intestate, have been granted at the Exeter Probate Registry to Mrs. Bertha Fouraker, the widow of the deceased. The gross value of the personalty amounted to 202*l.* 7*s.* 6*d.*

The will of Mr. Francis Hallam, of Burton-on-Trent, chemist, who died March 31, 1891, has been proved at Lichfield, by Mrs. Hallam (the widow), Mr. S. R. Hallam (the son), and Mr. H. T. Ford, the executors. The gross personal estate amounted to 10,803*l.* 7*s.* 11*d.*, and the net to 9,423*l.* 14*s.* 4*d.* The testator bequeaths to his widow 200*l.*, and to Mr. Ford 100*l.* He leaves two sisters an annuity each of 25*l.* He directs his executors, to whom he leaves his property real and personal in trust, to pay to each of his children by his first wife, upon their attaining 21, the sum of 300*l.*; and to all of his children, upon their attaining 23 years, 500*l.* each. Upon the death or re-marriage of his widow the testator directs the residue of his estate, subject to an annuity for his widow, to be equally divided among his children. He empowers his trustees to continue his business, using what capital they think needful, and to employ his second son, Frank, as manager.

The will (dated February 20, 1883) of the late Mr. Thomas Hyde Hills, pharmaceutical chemist, of 225 Oxford Street, and 45 Queen Anne Street, W., who died on November 19, 1891, was proved in the Principal Probate Registry, Somerset House, on December 15, with two codicils by the executors Mr. Wallis Hills and the Rev. W. H. Grove (the deceased's nephews) and Sir Arnold W. White, whom the testator appoints trustees of his estate. To the Pharmaceutical Society the testator leaves his portrait of his "late kind friend Jacob Bell," painted by Sir Edwin Landseer in two hours, and also his own portrait painted by his friend, Sir J. E. Millais, painted in three hours, together with a legacy of 1,000*l.* to provide a fund to further the election to suitable charities of orphans of members and associates of the Society who for three years have subscribed to the Benevolent Fund. To his sister, Eliza Mary Grove, of 22 Stockwell Park Crescent, the testator leaves 2,000*l.* To nine nephews and nieces he leaves 4,000*l.* each, with benefit of survivorship. To another niece he leaves 1,000*l.* To Miss Mary Millais and Miss Mary Quain, to whom Mr. Hills

stood godfather, he leaves 500*l.* each. To Sarah Cant, his cook and honskeeper, he leaves 100*l.*, to Harriet Taunt, his parlourmaid, 100*l.*, to Francis Middleton 1,000*l.*, to G. J. Ashford and W. B. Gillett now or formerly in his laboratory, 100*l.* each. To each assistant who has been three years or upwards in the business of J. Bell & Co. the testator bequeaths nineteen guineas, and to each boy who has been two years in the laboratory ten guineas. To his executors, if they act, the testator leaves 300*l.* each. His business at 225 Oxford Street he disposes of as follows:—Two-fifths share to his nephew, Wallis Hills; one-fifth to John Barnard; one-fifth to Samuel Gale, and one-fifth to John Henry Wigg. Should one of these partners wish to retire his share is to be offered at the price of two years' profits to each of the remaining partners in the order in which their names stand in testator's will. The leasehold premises on the west side of Hills Place the testator leaves to Walter Hills. The leasehold premises on the east side of Hills Place, and those in Marlborough Mews, together with the leasehold house in Queen Anne Street, with the plate, linen, pictures, furniture, &c., the testator leaves to his nephew, the Rev. W. H. Grove. To the National Gallery the testator bequeaths the two original studies of Sir E. Landseer for the lions in Trafalgar Square; and to the Royal Academy he leaves the unfinished portrait of Sir E. Landseer by Sir Francis Grant, P.R.A., in both cases free of legacy-duty. The portrait of himself by his friend Mr. Charles Landseer the testator leaves to his nephew Walter Hills, with a request that the portrait shall be kept at 225 Oxford Street. The residue of his estate, real and personal, the testator leaves to his executors in trust, to be divided as follows:—Three-sixths to his brother J. H. Hills, one-sixth to W. H. Grove, one-sixth to Kate E. Spencer (a niece), and one-sixth to Edward Hills (a nephew). By a codicil, dated September 28, 1888, the testator revokes the 100*l.* legacy to Harriet Taunt, he having presented her with 120*l.* on her then recent marriage, but he empowers his executors to pay her 150*l.* if they think fit. By a second codicil dated August 21, 1889, the testator leaves the one-fifth share in his business, which he had assigned to J. H. Wigg, to his nephew Walter Hills, the said J. H. Wigg having died on June 8, 1889. The gross personal estate amounted to 99,554*l.* 18*s.* 2*d.*, and the net to 98,057*l.* 7*s.* 8*d.*

The will of the late Mr. Herbert Scott, formerly of Budleigh Salterton, Devon, retired chemist, who died at Denbury, on October 21, 1890, has been proved at Exeter Probate Registry by the deceased's widow, Mrs. Sarah Jane Scott, the sole executrix, to whom the testator bequeaths and devises the whole of his property, real and personal, for her absolute use. The gross value of the personalty amounted to 408*l.*, and the net to 373*l.*

The will of the late Mr. George Waterall, of Nottingham, chemist and druggist, who died on May 1, 1891, was proved at the District Probate Registry on June 3, 1891, by the surviving executor, Mr. G. E. Waterall, the deceased's son. The gross value of the personalty amounted to 849*l.* 3*s.*, and the net to 779*l.* 12*s.* 4*d.* The testator bequeaths all his personal and devises all his real estate to his said son absolutely, subject to the sum of 1,200*l.* being held in trust for the benefit for life of the testator's daughter Ellen.

The will, dated December 9, 1886, of the late Mr. Joseph Wood, of Sheffield, chemist and druggist, who died on September 25, 1890, has been proved at Wakefield Probate Registry by Mrs. Wood, the widow, and Mr. W. H. Bacon, the executors. The gross personalty amounted to 8,932*l.* 4*s.* 4*d.*, and the net to 8884*l.* 4*s.* 11*d.* The testator leaves his widow an immediate legacy of 100*l.* and his plate, pictures, and household furniture and effects. He constitutes his executors guardians of any infant children there may be, and leaves his property, real and personal, subject to the foregoing provisions, to them, in trust for the benefit of his wife during widowhood with remainder to his children equally.

The will of the late Mr. C. Griffith, of Weston-super-Mare, chemist, who died on November 13, 1891, has been proved at Wells Probate Registry by Messrs. John, Francis (the deceased's sons) and Charles Griffith. The testator leaves his property real and personal to his executors in trust for the benefit of his several sons or their representatives in equal shares.

SOAP PLANTS.

By JOHN R. JACKSON, the Museum, Kew.

PROBABLY at no period of history has soap been brought so prominently before the civilised world as at the present. The article is a compound substance, and the reputation of rival soap-makers is due probably as much to the persistent manner in which they keep their special products before the notice of the public as to any particular ingredient used in their composition. Practically, soap may be said to be a vegetable product, for, indirectly, vegetable substances, especially oils, enter largely into its manufacture; but, besides these, there are numerous plants that possess a direct saponaceous principle. Many of these are well known, but we do not remember that anything has been done—at least, in recent times—in this country to collate matter bearing on these interesting, and, in many cases, useful, plants, a better or more extended knowledge of which might lead to many of them becoming of some practical utility. It is true that, in 1875, Professor Bernardin, the late able *conservateur* of the Museum at Melle, near Ghent, published a little pamphlet, entitled "*Classification de 40 Savons végétaux*"; but, as the circulation of this contribution to the subject is necessarily limited, a few general notes on saponaceous plants will probably have some interest. These notes have been arranged in botanical sequence, as probably the most useful to all concerned.

Leontice Leontopetalon, L.—An herbaceous plant belonging to the natural order Berberideæ, growing about a foot high, native of Asia Minor, frequent in Greece and all the islands of the Archipelago. Little seems to be known as to the actual detergent properties of the plant, except that the root is stated to be used at Aleppo as a substitute for soap.

Monnina polystachya, R. and P., and *M. salicifolia*, R. and P.—Plants belonging to the milkwort family—Polygalacæ—known as "Yalhoi" in Peru; and of them Lindley says:—"The bark of the roots, when fresh, is pounded and moulded into balls for use in washing. The dry bark also is detergent, and readily froths when agitated in water. It is used by the Peruvians as a substitute for soap, and the ladies of Peru ascribe the beauty of their hair to the use of an infusion of this bark. The silversmiths of Huanuco employ it also for cleansing and polishing wrought silver."

Saponaria officinalis, L.—This well-known plant belongs to the natural order Caryophyllacæ, and is generally known as the "soapwort," or "fuller's herb." Though found in hedges, on road-sides, and in fields, chiefly in the South-West of England and North Wales, it is considered only a naturalised plant in Britain. It is distributed through Europe and West Asia, and has been introduced into the United States. The leaves, when boiled or bruised in water, become saponaceous, and were used in olden times as a substitute for soap, especially, it is said, by the mendicant friars. The lather so formed has all the effects of ordinary soap, readily removing grease; and, in consequence of its not being affected by acids, it has been suggested that it might be usefully applied where soft water is not obtainable.

Gypsophila Struthium, L.—This is generally known under the name of "Egyptian soap-root." It is a native of Spain, where it is said to be used instead of soap for scouring. The root of *G. paniculata*, L., is used in Lycia for a similar purpose; and it is also extensively sold in the bazaars of Western Afghanistan and North-Eastern Persia as a soap for washing clothes. The powdered roots of this species, mixed with honey, are used as food by the people in Lycia. Dr. Flückiger has recently shown that *G. Arrostii*, Gussone, yields Sicilian soap root, samples of which have been collected in Catania. The following species of *Gypsophila* are also included in Professor Bernardin's list as producing saponaceous roots:—*G. acutifolia*, Fisch., Eastern Europe and Siberia; *G. altissima*, L., Siberia; and *G. fastigata*, L., described as the "saponaire" of Spain; and, besides these, the following plants belonging to the same natural order—*Lychnis chalcadonica*, L., known in France and Portugal as the "Croix de Malthe"; in Italy, as the "Croce de Cavaliere"; and, in Spain, as the "Croix de Jerusalem." It is stated to be used as soap in Tartary. *Lychnis dioica*, L., native of the South of Europe, is used at Pesth for washing; and *L. sylvestris*, Schkr., also a European species, is similarly used, as well

as *Agrostemma Githago*, L., which is now sunk under *Lychnis*; and *Silene inflata*, Sm. Little, however, seems to be known about the extent to which these last-named plants are used.

Acanthophyllum macrodon, Edgew.—This is a very spiny, tufted, herbaceous plant belonging to the same order—Caryophyllacæ—found in India and Afghanistan. The root-stock, under the name of "Bekh" (a name which is also applied in Afghanistan to *Gypsophila paniculata*), is used as a soap-substitute for washing clothes, woollens, &c., and is sold in all the bazaars of the larger villages.

Sida lanceolata, Retz.—It is stated that this malvaceous plant is known as the "broom plant" in Brazil, and that a soap is made of the ashes.

Adansonia digitata, L.—This is the well-known "Baobab" of West Tropical Africa, and belongs to the tribe Bombacacæ, of the natural order Malvaceæ. The ashes of the fruit are boiled with rancid palm oil, and are said to form an excellent soap, in Africa.

Balanites ægyptiaca, Delile.—This plant, which is a shrub or small tree, is known as "Soump" in Senegal, and belongs to the natural order Simarubacæ. The young fruits are purgative, and when ripe are edible and formed into an intoxicating drink by the negroes of the West Coast of Africa. Bernardin says the roots are saponaceous.

Æsculus Paria, L.—The American horse-chestnut, or buckeye. The roots of this tree are said to be preferred even to soap in some parts of America for washing and whitening woollens, blankets, and dyed cottons, the colours of which are improved by the process. Satins washed in this manner, and carefully ironed, look almost as well as new.

Sapindus Saponaria, L.—A slender tree, native of the West Indies and Tropical America. It bears a fruit about the size of a gooseberry, composed of a thick, tough, almost horny rind, covering a hard, globose black seed. The outer covering of the fruit, if allowed to stand in water for some little time, swells and produces a lather. Browne says:—"The seed-vessels of this plant are very detersive and acid; they lather freely in water, and are frequently used instead of soap, for a few of them will cleanse more linen than sixty times their weight of that composition, but they are rather too sharp, and observed to corrode or burn linen in time, and the water in which the tops or leaves have been steeped or boiled is observed to have the same quality in some degree."

S. Mukorossi, Gaertn.—This species is known as the "soap-nut tree" of North India. It is a handsome deciduous tree, cultivated throughout North-West India, Bengal, Kumaon, Sylhet, and Assam. The fruit, which is somewhat similar to that of the last-named species, but considerably larger, is very much used in India as a substitute for soap, for which purpose it is also exported. It is chiefly used for washing silk and woollen cloth, being regarded as superior to soap by native manufacturers.

S. trifoliatum, L.—A large tree of Bengal, South India, and Ceylon, and often cultivated. It is known as the "soap-nut tree" of South India, and its seed-vessels are used for a similar purpose to the last-named species.

Colubrina asiatica, Brongn.—A large shrub or small tree of Tropical Asia, Queensland, Northern Australia, and extending into the Pacific islands. It belongs to the natural order Rhamnacæ. Seemann says that the Fijians use the leaves in the preparation of a hair-wash to destroy vermin.

Vitis Saponaria, Seem.—A climbing plant belonging to the natural order Ampelideæ, and found in Queensland, as well as in the Fiji islands, where, Seemann says, the natives use it for the same purposes as the last. The stem, especially the thicker part, is cut into pieces from a foot to eighteen inches long, heated on hot stones, and, when thus rendered quite soft, it produces in water a rich lather, almost equal to that of soap.

Gymnocladus chinensis, Baill.—This leguminous tree is a native of China, as its specific name indicates. It is thus described in Forbes and Hemsley's "*Index Floræ Sincensis*":—"This is the soap-tree, the Fei-tsao-tou, or fat black bean, of the Chinese, used by women in washing their head and hair." The pods, which are about 3 inches long, 1½ inch wide, and 1 inch thick, are beaten with a mallet, and placed in water for about two days. They are sold in the market at the rate of about sixteen to twenty a penny. Bernardin says that the bark of the branches of the allied species, *G. canadensis*, L., is used in Canada as soap.

Gleditschia sinensis, Lam.—This is also a Chinese legu-

minous plant, the pod of which, when dry, is quite black, about 10 inches long, $1\frac{1}{2}$ inch wide, and very thin. It is used by the Chinese as soap, and also to restore animation in partially-drowned persons.

Entada scandens, Bth.—A large, woody, leguminous climber, found in the Tropics generally. The spirally-twisted stems are soft, fibrous, and spongy, and would appear to contain saponaceous matter, for the ladies of Manila use them, under the name of "Gogo," for washing the hair. The kernels of the seeds are used in Nepal for the same purpose, and in Bengal the hard seeds are employed by washermen for crimping linen.

Tetrapleura Thonnigii, Bth.—A large leguminous tree of West Tropical Africa. The pods, which are from 6 to 10 inches long, and about $1\frac{1}{2}$ inch broad, are rounded at the apex, and each valve has a stiff longitudinal, often wavy, wing running down its middle from end to end. They are of a shiny brown colour when dry. These fruits or pods contain a saponaceous principle, and are sold in the Sierra Leone markets for washing purposes. They are also occasionally imported into this country. The plant is known as the "Ogaguma" in Gabon.

Acacia concinna, D.C.—A climbing leguminous plant, native of the Eastern Himalayas, Western and Eastern peninsulas of India, Ceylon, Malay Islands, and China. The pods vary in length from 4 to 6 inches, are about $\frac{3}{4}$ inch wide, and $\frac{1}{2}$ inch thick. They are constricted between the seeds, and, when dry, are of a brown colour and have a shrivelled appearance. A considerable trade is carried on with them in some parts of India, as they are much used for washing, especially for the head.

Bernardin says that the pods of *Acacia latronum*, Willd., a small Indian tree, are used for the same purposes.

Albizia lophantha, Benth.—A tall shrub or small tree of West Australia, is described as containing 10 per cent. of saponin in the dried roots; while *A. Lebbek*, Bth., a tall tree, widely distributed through India, Burma, Ceylon, Malay Islands, China, North Australia, and Tropical Africa, is said by Bernardin to contain a saponaceous principle in its leaves, in consequence of which they are used in India and Arabia for washing purposes.

Enterolobium Timbouva, Lam. = *E. cyclocarpum*, Griseb.—A lofty leguminous tree of Jamaica and Venezuela. The pod is nearly circular, the stalk being apparently situated in the centre of the circle, and the positions of the seeds are marked by regular depressions. These pods are known under the name of "Orejera," and are used for washing in New Grenada.

Quillaia saponaria, Mol.—A tree some 50 to 60 feet high, native of the Chilean forests, and belonging to the natural order Rosaceæ. The tree is known as the "quillai" or "cullay" tree, and the bark as quillaia, or soap-bark. It is rough and dark-coloured externally, while the inner bark is of a whitish-grey colour. It is very rich in saponine, and is said also to contain a large quantity of carbonate of lime and other mineral matter. It is commonly used in Chili for washing clothes, and in France for washing silks, as it is said to remove dirt and grease and to impart a lustre without injuring the colour. It may also be used for cleansing hair-brushes, and for similar purposes, under conditions in which soap and other alkalies are powerless. Besides this, the pulverised bark makes an excellent hair-wash, and is said to be largely used by French hairdressers. By placing some of the powder in water and stirring it, it readily produces a froth, and, in consequence of this, it is said to have been used to give a fictitious head to stale beer. *Quillaia Sellowiana*, a Brazilian species, is described as having similar properties.

A species of *Begonia*, known in Egypt as the "Achalox," furnishes a bark, a decoction of which, according to Bernardin, is used in sheep-washing.

The leaves of the well-known papaw (*Carica papaya*, L.) also contain saponin, and are used by the natives in tropical countries for washing clothes.

Jacquinia armillaris, Jacq.—A low, rigid tree belonging to the natural order Myrsinæ, and found in the West Indies, Brazil, and Florida; has saponaceous leaves, which are sometimes used as a substitute for soap.

Pircunia saponacea, Welwitsch, known in Angola as "mutonga-tonga."—The roots are said to be saponaceous. The genus is now referred to *Phytolacca*.

Amongst monocoty ledonous plants there are several that have saponaceous properties. Thus, in the order Scitamineæ,

the fruit of *Bromelia pinguin*, L., is reported as having been found useful as a soap-substitute. A kind of vegetable soap is stated to have been prepared in Jamaica some years ago from the leaves of the American aloe (*Agave americana*, L.), which was found as detergent as Castille soap for washing linen, and had the superior quality of mixing and forming a lather with salt water as well as fresh. In Peru the leaves of this plant are used by first wetting the clothes, and then beating them with a leaf of the agave which has been crushed; a thick white froth is produced, and after rinsing the clothes are quite clean.

Chlorogalum pomeridianum.—A liliaceous plant of California, forming a large oblong bulb covered with coarse brown fibre. It is known in California as the "Amole." The bulbous root rubbed in water makes a thick lather, and is said to have a similar smell to brown soap. It was very much used by the North American Indians before the American possession of the country, and at the present time it is also much in demand for washing clothes, by merely removing the outer husk and rubbing the bulb over the fabric in the same way as soap.

Yucca filamentosa, L., and several other species of *Yucca*, natives of Carolina and Virginia, are described as yielding a saponaceous matter from their roots.

From the foregoing list of plants it will be seen how varied are the species in their botanical affinity, so that the saponaceous principle, though characteristic in some natural families, is very widely diffused.

THE MARSEILLES SOAP INDUSTRY.

THE manufacture of soap is one of the oldest industries of Marseilles. For a long time Venice and Genoa had the monopoly of this manufacture, but towards the sixteenth century two foremen from Toulon came to settle down at Marseilles. As they did not possess much capital, they installed themselves in an old house near the main road, and set up two boilers, in which they manufactured from the oils of Provence a white soap, which was used by the inhabitants of the town. They had to pay at that time a duty of $1\frac{1}{2}$ f. per quintal upon these oils. The industry did not extend much until, a number of years later, some merchants with capital developed it by building better works, providing more suitable implements, and bringing over workmen from Genoa, who were adepts in the art of soap-making. They were so successful that the manufacturers of Toulon and other places in Provence were obliged to have recourse to the use of a mixture of fat and butter in order to sell their goods at the same price as that of Marseilles. This kind of adulteration gave rise to such complaints that Louis XIV. issued an edict, dated October 5, 1688, in which the factories were placed under State supervision. This rigorous measure had the effect of increasing their number and improving their product, which now quite eclipsed that of Genoa. The deterioration of the olive-trees which followed in 1709 was another source of advantage to the Marseilles soap-makers, who monopolised the foreign oils which were in demand owing to the failure of the olive-crop. Thus the only thing that remained was to counteract the competition of Spain, whose special brands enjoyed an excellent reputation, and were much depended on. To accomplish this, the manufacturers of Marseilles, taking advantage of a strike, offered a high salary to a Spanish workman to come to Marseilles and manufacture soap according to the process in vogue at Alicante, which was a town of much repute in soapmaking. The foremen of Marseilles profited so much by the information gained from this foreigner that they were in a short time able to equal the products of Alicante, and also invented a new kind—a pale blue soap, which sold for 3*l*. per quintal. Then it became the custom to buy at Marseilles, where there was a good market for blue, mottled, and white soaps, and in the year 1760 the town possessed twenty-eight factories, capable of producing 300,000 quintals of soap. The usual consumption did not exceed 200,000 quintals, which represented then a sum of 4,500,000*l*., and that exported 200,000*l*.. Twelve hundred men were employed in the manufacture of soap, in which the porters of Piedmont had replaced convicts, who were employed before the suppression of galleys.

IN A DOCTOR SHOP AT DEMERARA.

IF a young pharmacist—one of the new school, with a white choker and immaculate cuffs—should come out to Demerara, he would be rather astonished to see how the drug trade is carried on. Instead of a clean and neat pharmacy he would find everything in the rough—dirty and slovenly; shelves dusted sometimes, perhaps only when stock is taken or added, and then only by negro porters while the whole place is often infested with vermin, including rats, mice, cockroaches, spiders, and ants. Some precautions have to be taken against these pests, of course, but with the large stocks kept by the principal stores, damage is continually being done, and the goods rendered dirty or unsightly. Cockroaches infest the barrels of arrowroot and currants, while rats and mice gnaw holes in boxes of raisins or anything else that is eatable, while the barrel of chopped sugar is almost black with ants.

From the above it will be seen that our stocks are rather different to those of a druggist in the mother country. Here the "Doctor Shop" sells the better class of groceries, besides such out-of-the-way things as fiddle-strings, wedding-cake ornaments, and spangles, while in one place you may buy a violin or concertina, and in others Christmas toys, pins, needles, and thread.

Our customers are as varied as our stock, but, unfortunately, while it is sometimes difficult to keep the latter in order, it is quite impossible to do the same with the former. The majority of the buyers are negroes, and for coarse rudeness, grumbling, disputing, and general nasty behaviour, these bear the palm. The men are rude, but the women—we must go beyond the superlative to stigmatise their utter shamelessness and want of self-respect. One of them bounces into the shop and bawls out at the top of her voice, "Gi me a gill (a pennyworth) scented, purified, perfumed, castor oil, and gi me 'nuff, 'nuff!" The long-suffering druggist's clerk (assistant) puts it into her bottle and hands it over. She holds it up to the light and bangs it down on the counter, crying, "Don't want it, can get more at the next shop!" or else, "Want more scent!" Some foolishly give a little more oil or scent, but it is generally better to pour the whole thing back, even though the bottle may have been a dirty one. If you do neither she will exhaust her vocabulary by calling you a thief or cheat, with plenty of big D's interspersed, and perhaps end by turning up the bottle and throwing its contents over the counter or on yourself if you are not wary. After five minutes' of this sort of thing she may suddenly cool down and say, "I want a peppermint; gi me a peppermint!" and to get rid of her you often give two or three sweets. This reminds me of the begging nuisance. Hardly a black man, woman, or child ever buys anything without demanding something or other. With castor oil it is a few drops of laudanum, tincture of lavender, or essence of peppermint; with senna, a piece of ginger; while, when nothing else is thought of, it is the inevitable, "Gi me two peppermints," and if you take them at their word and give two, they cry out, "Only two?" This is carried so far that when perhaps two or three articles are wrapped and handed over, the demand for something is accompanied by the threat that if you do not give it they won't take the other things.

At first the novelty is interesting, although not charming; but when it goes on from day to day, the clerk feels inclined to clear out. However, he generally learns to look upon these things as matters of course, remembering, perhaps, "that no gentleman will insult him and no other man can." All his customers, however, are not like this, for the mild and gentle Hindoo, known by the name of "Sammy," is a frequent visitor, and, although sometimes rather troublesome, he is generally amiable. The great difficulty with him is his language, and the "Johnny Newcome" is worried to serve *doo pisa capoor* (2*d.* camphor), *lnban* (benzoin), or half-a-dozen other articles for incense or to mix with his curry. Then comes his handsome dark wife, bedecked with jewels, who wants *sindhoor* (vermilion) for the parting of her hair, *surima* (black antimony) for her eyebrows, or *missie* (a sort of ink-powder) for her teeth. While wondering how she can bear such a heavy load of bangles—which sometimes extends from the wrist to the elbow—in comes John Chinaman for

luck-fun puck-a-you (oil of peppermint, used in the same way as menthol), or *cha-yeep* (tea), or half-a-dozen nice things, such as prunes, biscuits, and vermicelli, he being, above everything given to good eating.

Some years ago a good trade was done with the Chinese in opium, and at that time John bore a very bad name as a thief, which now, however, I am glad to say, he no longer deserves. I remember two drug-stores being broken open about twenty years ago; the boarding was sawn away at night so as to admit the thieves, who made free with what opium they could find, as well as with a few other things, but not medicines, for which John cares little. The Chinese are very particular as to the quality of their favourite drug, and it is usual to give them two or three pieces to handle, the coverings of which they pick at with their long fingernails, pilfering a dram or so with each. But this is not all. You must keep a good look-out, or they will steal a lump before your eyes, and you must remember how many pieces you have taken out. I was showing samples over the counter once, and put out four pieces, but, although on the watch, I suddenly found that one had disappeared, and at once charged John with the theft. Of course he denied it, with a smile that was childlike and bland; but this would not do for me, so I went in front of the counter and found it held between his legs and hidden in the folds of his baggy trousers. It was so impossible to check pilfering of opium twenty years ago that a druggist who sold about 600 lbs. a month had to make allowance for the loss of an average of 4 oz. a day.

Sometimes the drug-clerk will have a visit from a party of Indians, the men with nothing on but narrow strips of blue cloth round the loins, and the women dressed (?) in bead aprons of about six inches square. No one attempts to learn their language, so "Massa John," as he is called, strokes his hair as a sign that he wants scented oil. He is very particular as to the perfume, and will reject one sample after another until he is suited. He is very fond of wearing a tall hat, and if the clerk happens to have an old one, he is able to enjoy the air of importance with which the naked man of the woods struts along in front of his party, they following along the pavement in Indian file, the leader rendered conspicuous by being clothed with a hat and nothing else.

Among so many different nationalities the clerk necessarily picks up a few words of half-a-dozen different languages, being generally able to sell the articles asked for, whether by a Calcutta or Madras coolie, a Chinaman, Portuguese, or that most difficult customer, the African negro, who is now, however, fast dying out here. The last is, indeed, hard to understand, his English being so disfigured that twenty years ago it was a favourite joke when such a customer entered to call Johnny Newcome to serve him. Johnny would come up and hear "half a bittee cremattata, half a bittee shal, half a bittee shenny," &c., and cock his ear on one side to catch the words, but could make neither head nor tail of them. He would ask the African again and again what he wanted, until the man got annoyed, when the clerk, in despair, would at last give him up and call someone else, who would soon serve him with two pennyworth each of cream of tartar, epsom salts, and senna.

We get very few written orders from illiterate persons, as they mostly disfigure the spoken language rather than misspell words. One way of murdering the Queen's English is common here—and, I am sorry to say, also in the United States—that is, the leaving out of an essential part of a name, saying a bottle of Cologne or Florida for Eau de Cologne, or Florida Water. It is so senseless that everyone should protest against it. A rather good instance of phonetic spelling was a written order for "a sore inch," which, however, I had no difficulty in executing, as the word syringe is pronounced that way by some persons here. Cock's Spurus Plasters, and such-like ways of spelling the names of medicines are, of course, common; but when a Chinaman attempts to ask for an article by what he thinks the English name it is often very puzzling.

The negro is an inveterate swallower of drugs. Two to four ounces of castor oil, or the same weight of Epsom salts, form the usual purgative, but they often take both lots within a few hours. Purgative pills can never be too strong; they must gripe to show that they are working, and unless the negro feels himself almost in a state of collapse, he does

not consider they "have done him justice." Servants not uncommonly leave their employment with the excuse that they are going to take medicine, and I can easily believe that they require a week's rest after such a physicking. The druggist finds it useless to give these people advice; they have that little learning which is such a dangerous thing, and he might talk to them for hours without making any impression. They have also a morbid fear of being cheated, always fancying that a person has some selfish object in advising them, so that it is found best to sell them what they want and say nothing. It is, nevertheless, a sad thing that men and women, and especially children, should die from the results of over-doses of medicines, and that nothing can be done to stop it. Laudanum and paregoric are habitually administered to babies, and the resulting costiveness cured by enormous doses of castor oil, after which the treatment is repeated *ad infinitum*.

Superstition is rife, and of course the druggist sees its effects now and then, although the negro is rather cautious in speaking before the white man for fear of being laughed at. A lump of asafetida is sewed up in a bag and hung round a child's neck to keep away jumbies (ghosts), while some have a belief that gum benzoin burnt as incense will answer the same purpose. The Hindoo coolies suffer a great deal from the unfaithfulness of their wives, who often choose other mates when offered richer jewellery. The husband sometimes goes to the druggist for "love drops"—which, I believe, certain unscrupulous members of the trade at one time sold—to use as a charm to bring back the errant dark one. I have heard of a case where the coolie worried the druggist so much that he presented him with a little bottle of perfume into which a few drops of ether had been dropped, with directions to throw it over his wife and at the same time "speak good" and beg her to come home. A few weeks afterwards the grateful husband called on the druggist and told him that the charm had worked so well that his wife had returned. This led to other applications, but the druggist thought it better not to try any more experiments of that kind, although he had offers of five dollars or more for a bottle of the wonderful drops.

During the last few years there has been a great increase in the number of shops, and, naturally, with the competition cutting has been introduced to some extent. Twenty years ago Georgetown had only about half-a-dozen, the proprietors of which were all doing fairly well, and two or three of them saving money. Now there are at least four times as many, and none of them making more than a bare living. Demerara has a worse name than it deserves. True, it is not so healthy as other colonies in the temperate zone, but it compares favourably with most tropical countries. "Yellow Jack" visits us once in a way at intervals of ten to fifteen years, but, although very dangerous to new arrivals, it rarely attacks one who is thoroughly acclimatised. Here it is the same old story as told by the Irishman of somewhere else in the tropics—"Men come out here and they drink, and they drink, and they die; and then they write home and tell their friends that the climate killed them!"

NOTE ON PHOSPHATES OF LIME.

BY AN ANGLO-FRENCH PHARMACIEN.

THE employment of phosphate of lime in France may be taken as a type of the many differences occurring between French and English therapeutics. This chemical, at least during the writer's dispensing experience of some thirty odd years, is seldom, if ever, met with in English prescriptions, whereas in this country it is one of the most popular and most frequently prescribed remedies. Apparently it has enjoyed a successful career as a remedial agent from the middle ages to the present day, as our scientifically prepared phosphates are the lineal descendants of the prepared skulls, calcined horns, crab's eyes, and other relics of mediæval pharmacy. The popularity of the phosphatic treatment may be readily judged from the numerous specialities of which it forms the basis and which command a large and important sale both in the home and export trade. Here may be mentioned the solution Coirre, 10 oz. bottles selling at 2.50 f., consisting of phosphate of lime

dissolved in dilute hydrochloric acid, usual dose from one to three tablespoonfuls. Equally popular is the solution Odet, prepared from bones (probably the prototype of Horsford's acid phosphates), which is said to destroy the morbid germs in diseases of the respiratory organs, and is recommended in general debility, as under its action the nitrogenous alimentary products are transformed into muscle. This solution is used in the same doses as the first mentioned, and bails from Vilette, near Vienne, Isère. The solution Bourguignon, or chlorhydrophosphate of lime, is much vaunted in coughs, bronchitis, anæmia, and as a substitute for cod-liver oil. The Mariot monks also appear in the field with an acid phosphate, put up in quart bottles selling at 5 f. as a universal restorative in pulmonary disorders. Then we have a later development of the same idea emanating from M. Jacquemaire, of Villefranche, Rhône, who puts up his phosphate in an aerated form in patent stoppered bottles, so arranged as to preserve the gas during the consumption of the liquid. The solution sold under the names of Drs. Albens and Bonnet are similar to the preceding. The phosphate also appears in combination, such as that of Patauberger with creasote, Marchais with tolu, &c., and in many popular wines, such as that of Vial of Lyons; here may also be mentioned the well-known lactophosphate of Dusart, which has yielded to its fortunate inventor a very considerable income and still retains its popularity. In daily use during the summer, when diarrhoea is prevalent, is the old decoction of Sydenham, with phosphate of lime, bread-crumbs, and gum, the *ultima ratio* of most of our prescribers in this complaint.

Chemical manufacturers, such as the Société Française, offer us the following choice of phosphates, probably to suit all tastes:—(1) Calcined bones, a mixture of phosphate of lime and magnesia, carbonate of lime, and oxide of iron. (2) Basic phosphate of lime (P_2O_3CaO), prepared from the above, but deprived of foreign salts. (3) The neutral phosphate, prepared by double decomposition, and which is soluble in hydrochloric acid in the proportion of 100 to 65, lactic acid 100 to 140, phosphoric acid 100 to 145. (4) Acid phosphate, in a paste of the consistence of honey or crystallised in scales, and soluble in all proportions of water, frequently employed for making an aerated water for table purposes. (5) Chlorhydrophosphate, in the form of a soluble paste. The same company give the following formulae for chemists putting up their own articles to compete with the specialists:—

Sol. Calc. Chlorhydrophosph.

	Parts
Basic phosph. lime	17
Hydrochloric acid, the least possible, say ..	10
Distilled water	973

Mix.

Syrup Calc. Chlorhydrophos.

	Parts
Basic phosph. lime	1250
Hydrochloric acid	8
Distilled water	440
Sugar	630
Tincture of lemon	q.s.

Syr. Calc. Lactophosph.

	Parts
Basic phosphate	1250
Lactic acid	14
Distilled water	440
Sugar	630
Tincture of lemon	q.s.

The solution of biphosphate is also prepared in the proportion of 17 parts in 1000 of vehicle.

A well-known house in Rue Vieille du Temple, Paris, make a speciality of soluble phosphate of lime in scales for use by chemists. This preparation is perfectly soluble, and free from any traces of lead or arsenic.

Looking at the large margin of profits which these preparations yield to the chemists, the writer thinks that they might find a place amongst the counter adjuncts of advancing chemists, and prove equally serviceable on the other (*i.e.*, the English) side of the Channel.

OLIVE OIL.—Oil-soluble aniline blue is now used to give to olive oil the green colour which some people like so well.

VETERINARY PRACTICE UNDER THE STUARTS.

IN the reign of his Majesty King Charles I. there lived a certain "Marishall and Ferrier" named Thomas de Gray. This gentleman wrote an imposing treatise on veterinary practice which he called "The Expert Ferrier." A copy of this work has been lent to us by Mr. Picken, of Newport. It is dedicated in the usual terms of fulsome adulation to "The Most High and Mighty Monarch ('Charles,' &c., whom the author finds "justly placed in a glorious sphere elevated in a most conspicuous altitude above other inferior and subordinate orbes." Thomas evidently does not underestimate the importance of his work, which he describes as the "Embrion of his study, travels, experience, and practise." But he is sure that "(in these censorious times) it cannot subsist without his Majesty's royall protection." We should be glad to know that the Most High and Mighty Monarch subscribed handsomely to the work, and that the loyal author's devotion to his elevated but unlucky orb was limited to his literary services.

Mr. de Gray's style is even more pompous and verbose than that of his contemporary medical authors, which is saying as much as can be said. He adopted an ingenious method of occupying five lines where one would have sufficed, which was to bestow such information as he had to give by means of a dialogue carried on between *Hippophilus* "a gentleman, one who is the true lover of the horse:" his province is to ask questions; *Hippiatrus*, "the Ferrier or Marishall, one most expert in horse-leech craft": he assumes a tone of omniscience in the conversation; and *Hippoferus*, "his servant or journeyman, sometimes his apprentice, bred up by him," loquacious and cunning to a degree. This is the way a recipe is communicated through these three worthies:

§ 1—A.

Hippoph.—Tell me, *Hippoferus*, doe you know the Receipt which is called *Acopum*? Doe you also know it's Nature? Whether it is a Medicieue to be taken inwardly, or an Unguent to be applyed outwardly?

This sets *Hippoferus* off at immense length, coming occasionally to the point, and wandering off from it again. He knows the remedy well "to be a most souveraine thing in some causes; it is both a medicine to be taken inwardly and an Oyntment to be applyed outwardly." Then he quotes from Master Blundevile and Master Markham about it. These seem to have been the chief authorities of the day on veterinary matters; we find them frequently mentioned. Blundevile got the recipe

from the Italians when hee lived in Naples as himselfe told me, where it is very much used; and he also affirmed that it was formerly in much use and high esteeme among the ancient Greeke Ferriers, who gave it the name of *Acopum*.

After a good deal about its virtues "in all kind of inward maladies" if taken internally, or "against wearinesse and tyrednesse" if applied outwardly, finally *Hippoferus* supplies the formula, which is as follows:—

Take *Euforbeum*, halfe an ounce, *Castoreum*, one ounce, *Adraees*, halfe a quarter of a pound, *Edeltium*, halfe an ounce and halfe a quarter, Pepper one ounce, Foxe grease, halfe an ounce, *Opoponax* one ounce, *Incerpitium*, three quarters of an ounce, *Amoniacum*, halfe a quarter of a pound, Pigeon's dung, as much, *Gabbanum*, halfe an ounce, *Nitrum*, one ounce and a quarter, *Spuma nitri*, three-quarters of an ounce, *Ladanum*, a quarter of a pound, *Perchurum* and Bay berries, of each three-quarters of an ounce, *Cardamum*, two ounces, seed of Rue, halfe a quarter of a pound, seed of *Agnus Castus*, one ounce, Parsely-seed, halfe an ounce, dried roots of *Ireos* or *Flour de Luce*, one ounce and a quarter, *Isope* and *Caryo Balsanum*, of each a quarter of a pound, Oyle of *Floure de Luce*, a quarter of a pound and halfe a quarter, of Oyle de Bay as much, Oyle of Spikenard, three-quarters of a pound, *Oleum Cyprinum*, three-quarters of a pound and halfe a quarter, the oldest oyle Olive, a pound and a halfe, *Piche*, a quarter of a pound and two ounces, Turpentine, a quarter of a pound: melt of every of these that will be molten severally by themselves, and then mingle them with residue of the ingredients being first beaten to fine powder, and after they have boyled a little on the fire, take it off, and straine it into a cleane gally-pot, and so keep it for your use, and when you are to administer of it to your horse, let it be given as before is shewed, and if by long keeping it waxe hard, then soften it with the oyle of Cypress, so that it may be good and thick. . . . It helpeth convulsions in the sinewes and muskles, it driveth forth all noysome humours, and disburdeneth the head of all griefe, being

put up with a long goose feather annoynted in it into the nostrills of the horse: it healeth (I say) all manner of convulsions, cramps, unnesse, and string halts, colds, and rhumes; it dissolveth the liver being troubled with oppilations and obstructions; it helpeth Siccly and Arility in the body; it banisheth all weatnesse and tyrednesse if his limbs be bathed with this medicieue; and lastly it cureth all sorts of inward diseases if it be administered by way of Drench to a horse in wine, strong Beere, or good Ale.

Will the veterinarians of 250 years hence hold as poor an opinion of present-day arts? It seems impossible to believe that as much change can take place in the future as we see on comparing the present with the past.

The total ignorance of pathology displayed in this work is well exemplified in the advice to pull out the eyelashes and "smellinge hayres" on bringing a horse up from grass, which, by the way, is to be done on "Bartholomew's daye": and, again, in the idea that a horse could be seriously ill from eating a red worm:

The cure is, Take of the Urine of *Man*, as it cometh warme from him, one pinte, and of bay salt one handfull, stirre these well together, and give it him with a horne, and after walke him up and downe halfe an hour and he is cured. This I have sundry times tryed, and it is a certaine cure.

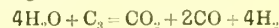
Then follow instructions for the cure of a horse that hath eaten a feather. Then a recipe for a horse that hath eaten a spider, which, says the author, "I take to be much more perilous to the life of a horse" (than the feather or the worm). Horses of this century could probably digest a bushel of spiders without much injury.

Woman's milke, Sallet oyle, Bergar-stone, fresh butter, old Boares grease, black flint, the powder of the bottom of a Brasse pot, and other curious items go to make up the mysterious compounds, which at that time were thought the more likely to effect a cure in proportion to the number and disgusting nature of the ingredients.

We have sought in vain in this book for any hint of value which the author's experience may have taught him, and which the hurrying ages may have forgotten. The only item that strikes us as probably of some use is to make a decoction of colocynth, or "coloquintida," to make a lotion for horses to prevent annoyance from flies. This is probably in use still in some parts, and is not likely to be better than the more frequently employed decoction of green walnuts or Jeyes' fluid.

Our author discusses on one page, with much display of learning falsely so-called, whether a horse has brains. One cannot credit him with much stock of this commodity himself, or he would have demonstrated the fact upon a dead subject.

WATER-GAS is made by passing steam over red-hot coals, when the following reaction ensues:—



The last two gases are inflammable, and constitute the valuable constituents of the mixture. As thus constituted the gas burns with a hot but non-luminous flame. It is exceedingly well adapted for use as fuel without further preparation; but, to render it luminous, crude petroleum is allowed to flow into the retorts, and the heavy hydrocarbon vapours resulting from its decomposition so "enrich" the water-gas that it is rendered as luminous as coal-gas.

A REMEDY FOR MEDICINAL "SHOPKEEPERS."—At a recent meeting of the New Jersey Pharmaceutical Association, Mr. Abernethy, the president, proposed a State laboratory as a remedy for the annoyance of the duplication of similar stock in stores of pharmacists. It was specialties he particularly aimed at. He said that, in consequence of the way these are pushed, they are prescribed and ordered by the druggist at great inconvenience, and in a large majority of instances used only a few times and then cast aside or placed on the shelf as dead stock. There is but one way he knows of to remedy this evil, and that is to establish a laboratory under the auspices of the association, where everything in this line can be manufactured and furnished to pharmacists of the State at the lowest cost compatible with the keeping up of the establishment. This is one-sided co operation, Mr. Abernethy, and that sort of thing fails generally.

PHARMACEUTICAL ETYMOLOGY.

THE following notes are gathered from the most recently published volume of the Philological Society's new English Dictionary, edited by Dr. Murray.

There are several "CLOVES" of distinct origin. The term as applied to the spice, the dried flower-bud of *Caryophyllus aromaticus*, is derived from the French *clou*, which word was originally applied to it on account of its shape. The *Caryophyllus* is the Latinised form of the Greek term derived from *karyon*, nut, and *phyllos*, leaf. In old French the spice was termed *clou de girofle*. This term passed on to the clove-scented pink (*Dianthus caryophyllus*), but *girofle* has passed into English as gilly-flower, and represents other scented flowers. Some very correct people, with inaccurate ideas of its etymology, have civilised gillyflower into "July-flower."

The "clove" of garlic, &c., is traceable to the old Teutonic words which give us cleave, clove, cleft, and is applied on account of the separated condition of the fruit.

How "clove," an old weight of wool and cheese (=about 7 or 8 lbs. avoirdupois), came to be adopted is not known. It is understood to be derived from the Latin *clavus*, a nail, which was also, under that name, a lineal measure in olden times. The connection between the nail (measure) and the clove (weight) seems to be lost.

CLISSUS, or CLYSSUS, is an obsolete Paracelsian chemical term used to indicate the quintessence of a thing.

CLUB MOSS (*Lycopodium clavatum*).—The name is translated from the Latin *muscus clavatus*, and was applied to the plant because of its club-shaped spikes of spore cases. In old Dutch it was called *Wolf's Clauen*, and "Woolfe claw mosse" is another old English name for it.

CLYSTER, which has also figured frequently in English as "glyster," is a Greek word originating from *klyscin*, to rinse out, or drench. Clyster and clyster-pipe were contemptuous terms applied to physicians and apothecaries by some of the elegant poets of the Restoration period.

COBALT is the old German Kobold, the demon or goblin of the mines. The ore of cobalt was so called by the Harz silver-miners, because of the trouble it gave them. It was regarded as worse than worthless. It caused injury to the health, this property being due to the arsenic with which it was often associated. The metal was known to Paracelsus, though its discovery is usually credited to Brandt, in 1733.

COCA is the Spanish form of the Peruvian *Cuca*. Its first mention in English literature is found in Bullokar, in 1616.

COCCULUS (as in *Coccus Indicus*) is merely a Latin word signifying a little berry.

COCHINEAL comes, *via* the Spanish *cochinilla*, from the Italian *cocciniglia*, traceable to the Latin *coccineus*, scarlet coloured. In Spanish the same word, a diminutive of *cochina*, sow, is used as the name of the wood-louse, and has been suggested as the origin of cochineal. But the two words appear to be only fortuitously similar, and have entirely distinct origins.

COCOA and COCOA-NUT have occasioned no end of confusion among uneducated people. Cocoa (the "grateful and comforting" article obtained from the seeds of the *Theobroma cacao*) is a corruption of the three-syllabled word "ca-ca-o," which was the Spanish adaptation of the Mexican name for the seeds, *cacauatl*. The cocoa-nut was, and should be still, written "coco." It was so called by the Portuguese when they discovered it in India, where it was called in the native language *tegma*, or *tenga*. Coco is a Portuguese word for grin, or grimace, and was probably used in reference to the queer-face-like appearance of the base of the shell with its three holes. It is worthy of note that in Johnson's Dictionary the article "Coco" was run together with that on "Cocoa," apparently by an accident, for Johnson himself used the word "Coco" (plural *Cocoos*) in his other writings. This accident is probably to some extent the cause of the confusion which has prevailed between the two words.

CODEINE is from the Greek *codeia*, a poppy-head.

COD-LIVER OIL.—Dr. Murray has discovered a reference to this substance as a medicine in the *London Medical Journal* in 1783, where Dr. T. Percival recommends it as a

remedy for chronic rheumatism. Dr. Percival writes: "It will be doing some service to the healing art to communicate to the public a brief account of the *oleum jecoris aselli*, or cod-liver oil; the salutary properties of which, I believe, have been little experienced beyond the vicinage of Manchester."

COFFEE is the descendant of a Turkish word, *qahvah*, which was applied, not to the berry, but to the beverage, and is believed to have originally meant some sort of wine, and to have been derived from a verb which meant to have no appetite.

COLCHICUM is the Latinised form of the Greek *Colchikan*, which was applied to the meadow saffron in reference to the poisonous arts of the legendary Medea of Colchis, who was credited with having made use of it. The term "venena Colchica" was a common one among Roman writers.

COLCOTHAR, Spanish *colcotar*, is the adaptation of the same Arabic term, as was applied to the red peroxide of iron left in the retort after the distillation of sulphuric acid from iron sulphate. It is believed that it may have been a corruption of the Greek *chalchanthos*.

COLD CREAM, Dr. Murray says, is "made of spermaceti, white wax, and otto of roses or other perfume." If the etymological information in the dictionary is as defective as this, it is not worth much. The first English use of the term is traced to 1709, where it is named, among other toilet articles, in *British Apollo*. Russell (1810) must have been an advertisement poet. He is quoted as the author of the following:—

A pot of cold cream to Eliza you send,

Whoe'er with this cream shall his countenance smear

All redness and roughness shall strait disappear.

COLIC pertains to the *kolon* (Gr.), the lower part of the intestinal canal.

COLLODION, from *kolla* (Gr.), glue, was a term invented by Paracelsus (collodium) for some gluey substance.

COLLYRIUM, Greek *collyrion*, from *kollura*, a roll of coarse bread, meant originally a bread poultice, which was made from the roll just named.

COLTSFOOT.—The *Tussilago Farfara* was so named from the shape of its leaves. It was also called "Fole foote," "Horse houe," and "Bull foote" in old English.

COLZA is a French adaptation of the Dutch *Koolzaad*, cole-seed.

COMEDO, or COMEDON, is from the Latin *comedere*, to eat up, devour, and meant originally the worms which devour the body. It is now applied to the matter which forms in the skin like a small maggot.

CONFIT is an old English abbreviation of the Latin *confectum*, coming to us through the old French *confite*.

COMMERCE began to be substituted for "merchandise" in the latter part of the sixteenth century. It is composed of *com*, with, and *merc*, *merci*, wares. For more than a century the word was accented on the second syllable, as in Watts's line (1709), "I hold no more commerce with Hell."

COMPETE and COMPETITOR are among those words of which the original sense has been modified by human tendencies. The etymological meaning, and no doubt the early use of the words, implied a seeking in company, a sort of partnership. The union develops into rivalry, the rivalry into opposition, which is more like the modern signification.

CONGOU, as applied to tea, is a corruption of the Chinese word *Kung-fu*, work. It means tea on which work or labour has been expended.

INSECT-POWDER.—The ash of the genuine powder should not run over 8 per cent. Anything above this should be examined carefully for lead or barium. The ash should be almost entirely soluble in hydrochloric acid. If part is insoluble and the clear fluid becomes green upon boiling, if H_2S produces a black precipitate and KI a bright yellow crystalline one, it may be accepted as conclusive proof that lead chromate is present.

ALKALIMETRIC INDICATORS.

THE following paragraphs were omitted from Mr. R. A. Cripps's paper on indicators, which we published on November 28:—

FISCHER'S REAGENT.

Syn.: Dimethylamidoazobenzene. The author described how this is made, and stated that the substance occurs as an orange-yellow crystalline powder, soft and silky to the touch. It is almost insoluble in water, but soluble in alcohol. A solution in rectified spirit, containing 1 in 500, is of convenient strength. One drop of such a solution is sufficient for 100 c.c. of liquid.

Uses.—Speaking generally, Fischer's reagent may be employed in place of methyl orange, which it advantageously replaces on account of the rather brighter tints: in alkaline solutions yellow, in acid pink. The author has used it in a great many titrations, and has at present found only one substance (spt. ammon. fetid.) with which its indications are not as good as methyl orange.

LAKMOID.

Syn.: Resorcin-blue. Prepared by heating resorcinol and sodium nitrite together until ammonia ceases to be evolved. It is a glistening brown powder, very slightly soluble in water, but readily so in alcohol. Its solution, like litmus, is blue in alkaline, red in acid, liquids. A solution in dilute alcohol (1 of S.V.R. to 1 of water), containing 1 grain in 1 fl. oz., may be employed.

Uses.—R. T. Thomson devotes considerable attention to lakmoid in the papers previously referred to. The author's results confirm his, and are briefly as follows:—For strong acids or alkaline hydrates lakmoid solution acts well, but for carbonates, sulphides, sulphites, phosphates, arseniates, or borates it is far preferable to use the papers, a drop of the liquid being removed by a glass rod, and applied to the paper. In this way lakmoid may be used in place of methyl orange or Fischer's reagent for the titration of borax; carbonates of sodium, ammonium, &c.; effervescing preparations of magnesia, lithia, &c.; phosphates, and many other salts. It is, in fact, more nearly allied to methyl orange than to any of the other indicators, and the factors are the same; like it, lakmoid cannot be used for oxalic, acetic, lactic, citric, tartaric, and some other organic acids.

IDEOESINE.

Syn.: Erythrosine, tetraiodofluorescein. Fluorescein = resorcinol phthalein anhydride. This is a new indicator, which has formed the subject of a paper in the *Chemical News* for November 6, 13, and 20, by F. Mylius and F. Foerster. It is prepared by mixing solutions of fluorescein and iodine in sodium hydrate and adding acetic acid. It appears in commerce as sodium or ammonium salt, and may be purified by treatment with ether and acetic acid, shaking out from ethereal liquid with dilute NaHO, and precipitating with strong NaHO. The precipitate is washed with spirit and crystallised from hot alcohol, from which it separates in plates.

Forms for Use.—Messrs. Mylius and Foerster recommend an ethereal solution of the colouring matter purified as above, containing 2 mg. per litre. Mr. Cripps has used an aqueous solution containing 1 in 10,000, of which 4 drops will be sufficient for a titration. The actual titration is carried out differently from those with the usual indicators. The solution to be tested is contained in a stoppered flask, the ethereal solution of iodeosine added, or 4 drops of the aqueous solution and sufficient ether to give a distinct layer after agitation. If the liquid be acid, the ether will be coloured a yellowish tint, which becomes colourless when rendered alkaline and shaken, the aqueous liquid becoming a pale rose tint. The authors claim that this indicator is capable of reacting accurately with millienormal solutions. Mr. Cripps finds that the change of tint takes place by the use of a single drop of a centinormal solution.

Uses.—This indicator is of value in such cases as require great delicacy; it possesses little, if any, advantage in the majority of daily assays, but for estimating alkaloids it is by far the best indicator Mr. Cripps employed. It is also of

service in estimating the alkalinity of water, and traces of acids or acid salts in so-called neutral chemicals. He has used it only in the titration of strychnine, codeine, morphine, quinine, atropine, physostigmine, and cocaine, for all of which, except the last, it answers admirably. His plan is as follows:—From 20 to 50 milligrammes of the alkaloid (or alkaloidal residue from assay of drugs) are dissolved in 5 c.c. of vigintinormal HCl, and diluted to 20 c.c. with water; 4 drops of iodeosine solution added, and 10 c.c. of neutral ether. Bicentinormal Ba(HO)₂ is now added from a burette, with frequent agitation, until the aqueous liquid becomes rose-coloured. A previous titration has determined the value of the baryta solution, the difference between the two titrations being due to the alkaloid.

Medical Cleanings.

FOR SCIATICA.

GIVE a draught containing a drop each of the tinctures of colchicum, cimicifuga, aconite, and belladonna. This every three hours. It is said to be a safe and sure thing.

SALOL PILLS.

As salol only splits up in the system when it reaches the intestines, Ceppi proposes that it should be made into pills which will not dissolve until they pass the stomach. Yvon, therefore, suggests that after the salol has been massed, the pills should be coated with a solution of 30 grains of salol and 8 grains of tannin, in 3 drachms of ether, then with ethereal tincture of tolu. These answer the purpose admirably.

GALLACETOPHENONE FOR PSORIASIS.

GALLACETOPHENONE is a derivative of pyrogallol, and is made by replacing three hydroxyl groups in pyrogallol with methyl-ketone. The product may be given internally, or by hypodermic injection, or may be applied externally in the form of an ointment (1 to 10). Gallacetophenone is a yellow powder, soluble in hot water, alcohol, ether, and glycerine. It is not so soluble in cold water, but its solubility is increased by the addition of acetate of soda. The following solution is recommended:—

Gallacetophenone	1 drachm
Acetate of soda	1 oz.
Water	3½ ozs.

Mix.

PARAFFIN IN DIPHTHERIA.

DR. SAMUEL RIDEAL, of St. George's Hospital, following up Mr. Turner's note on the use of paraffin in diphtheria says that the liquid condition of paraffin appears to be an objection to its use, as it can only be possible to coat the surface attacked with a thin film of the liquid. This difficulty might be overcome by converting the liquid paraffin into a semi-solid condition, as can readily be done by agitating it with a soap or saponin. A convenient way of making a paraffin ointment for this purpose would be to agitate with an egg whisk a mixture of paraffin and 10 per cent. of warm water containing 1 per cent. of ground saponaria bark. The small quantity of saponin required to gelatinise the paraffin is unlikely to have any therapeutic action, and in this form the paraffin could be applied with a brush in much larger quantities at a time, and would adhere better to the surface of the membrane it is required to disintegrate. The liquid vaseline of the German Pharmacopoeia might also be used in the place of ordinary paraffin, and would no doubt produce similar beneficial effects.

TRADE REPORT.

See the page before Editorial Notes.

CORRESPONDENCE.

See the pages behind Index.



Memoranda for Correspondents.

Always send your proper name and address; we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

The Vaseline Famine.

SIR,—In your issue of December 12, the Chesebrough Company were charged with trying to mislead the public into the belief that everyone selling as vaseline anything but their original packages was guilty of fraudulent substitution. In their letter of this issue, they have not denied the charge, nor have they promised amendment. They are wise in not defending it. I have been supplying vaseline ever since I have been in business, and never till the last few weeks either bought or sold any other brand of petroleum jelly. As far as I am concerned the statement they have published that no vaseline is genuine but what is supplied in their packages is incorrect. They say that chemists have no excuse for rebottling their vaseline. I will succinctly state why I prefer to buy vaseline in bulk and retail it in my own packages. I get an increased profit, and my customers prefer it. I sell principally 1*lb.* boxes, and 6*d.* tins. A gross of 1*lb.* boxes costs me 6*s.* 6*d.*, as against 7*s.*, and my customers get more vaseline, and some say it is better than that in the company's 1*lb.* tins. Three-ounce squat screw-capped jars, filled and attractively labelled, cost 3*s.* 6*d.* per doz., and sell freely at 6*d.* each. The competing original package is a long-necked bottle, closed with a cork, specially constructed on the principle of how not to do it. It costs 2*s.* 6*d.* gross, buying it on the most favourable terms.

The Chesebrough advertisement says it sells at 5*d.* It may do so in the Orkney or Shetland Isles, but in London, where my business is located, I know it is to be had at 3*d.* The Chesebrough Company have powerful and wide-awake opponents, as your advertising columns abundantly show: if they don't wish to "get left," let them cease to circulate false statements, putting their ware into sensible packages and taking precautions to stop immoderate cutting.

December 19,

Yours faithfully,
HERBERT H. PRESBURY.

SIR,—The Chesebrough Company in their letter of December 15, seem to ignore the fact that all these years they have allowed chemists, both wholesale and retail, to break bulk and sell "vaseline" in small quantities, and it is rather late in the day to object to their so doing; it has certainly become a usage of the trade, and if a test case were brought before the court, I think chemists would have common sense on their side and also the sympathies of the public.

The company say there is no inducement to put it up, and that chemists can get 100 to 120 per cent. profit by buying from them. Does the grocer or oilman who sells the 6*d.* size for 4*d.* or 4½*d.*, and the 1*lb.* size for 8*d.* (I quote from price-lists in my neighbourhood), get 100 per cent. profit? The only way to get a decent profit is to rebottle it, for then we can sell as cheaply as, or more so than, these men.

Then again, as to using bulk for dispensing only, as far as my business is concerned, a 5-lb. tin would last me about three years, although I make up about 4,000 prescriptions annually, whilst in 2-oz. and 4-oz. bottles I sell getting on for 1 cwt., and the mere fact of having so many rows of bottles, neatly labelled, and exposed to view in the cases round the

shop, is a good advertisement for the makers; and this brings me to the last point—viz., although there may be some who are so dishonest as to sell imitations as the genuine article, to whom by all means let the company turn their attention, there must be hundreds of chemists who would scorn to do such a thing; these men have been good friends in the past to the makers of "vaseline," but this friendship will not be cemented by the policy which is foreshadowed in the letter in question.

I am, dear sir, yours truly,
V. A. SALINE. (192/73.)

SIR,—The Chesebrough Co. are beginning at the wrong end of the stick in cutting off the supply of 5-lb. tins. They should rather have given up the smaller sizes. What they say about the profit chemists can get on their smaller sizes is perfectly true at present, but it is very questionable how long they will be able to obtain it if they make their customers familiar with the smaller sizes packed by the company. Why, they would be in the hands of grocers and all other dealers and cut down to 5 per cent. profit in a very short time. I have ordered labels—"Pure Petroleum Jelly—British Pharmacopoeia"—and intend putting that up and pushing it on its own merits, when my present stock of vaseline is exhausted, and only selling vaseline when compelled to, and I certainly do not intend stocking it in any other than the old forms. It would be only fair if the Chesebrough Co. would also look at the other side of the question a moment. That they originally introduced and created a demand for vaseline no one would deny, but that demand has been extended in a way that advertising, even when aided by intrinsic merit, certainly would not have done, by chemists putting it up and pushing it as vaseline, and now the share of the business which they (the chemists) have created the company wish to monopolise. They must expect us to struggle against this in every legitimate way. Chemists are now much more practical business-men than formerly. They have a power, and are beginning to know how to use it.

Yours faithfully,

PRACTICAL. (191/36).

SIR,—If the Chesebrough Company can ensure our getting 5*d.*, 6*d.*, 1*s.*, and 2*s.* for their bottles of vaseline, we shall be very well content to sell only bottles of their filling; but this they cannot do, and there the difficulty comes in. The Chesebrough Company must know perfectly well that their goods, and all other packed articles put out to the public at a definite price, are sold by stores, drapers, grocers, and all those buccanniers of trade who prey on the legitimate gains of others, at prices scarcely above the net cost of the article, and we could no more get the prices named in the Chesebrough letter than we could get eighteen pennies for a shilling.

As the matter stood we could get a 5-lb. tin of vaseline, fill it out into 2 oz. and 4 oz. bottles, and get 6*d.* and 1*s.* for them without any difficulty, whilst if we supply the company's bottles we constantly are told, "I get it for 3½*d.* or 4*d.* at the stores, or at So-and-So's shop, and if you don't charge the same I shall go there for it," and where is our 100 per cent. profit then?

With respect to imitations and substitutions, I have no sympathy with persons who are guilty of those practices, and trust the company may be able to stop all that; but I think it would pay them better to let things remain as they were, to go on supplying the 5-lb. tins as before, and letting the purchaser do as he likes with the contents. It would be well to remember that there is a great deal of vaseline used in various ways besides that sold in bottles to the public, and if the company are going to restrict the sale of vaseline in bulk to 1*lb.* tins, which means 1*s.* 3*d.* or 1*s.* 6*d.* per lb., it will to a great extent go out of use, for people will not pay that price when they can obtain plenty of good soft paraffin at 6*d.* or 8*d.* per lb. that will answer many purposes quite as well as vaseline.

Yours faithfully,

Manchester, December 21.

W. WILKINSON.

SIR,—The letter of the Chesebrough Company in your current issue, will, I think, be considered unfair in tone and unsound in logic by most retailers of their speciality. There

may be chemists who have and do put up imitations of vaseline and call them by the name of the genuine article. Their conviction would give general satisfaction, and the company's remedy is obvious. But why begin complaining so late in the day of a practice that has become well-nigh universal, and which, whatever the company may say, has done much to popularise their speciality? I have myself always felt that vaseline was far in advance of any imitation product, and have consequently refused to encourage the sale of a substitute. Had I, on the other hand, chosen to personally recommend an imitation, I should certainly have seriously interfered with my own retail sales of vaseline, as many customers would without hesitation accept a similar article, though called by another name. The reason why I, and doubtless chemists generally, prefer bottling vaseline to selling the company's packages, is that their bottles are a favourite weapon of that abomination of desolation the "cutler," whereas one's own packages, equally genuine, have an individuality of appearance which goes far towards assuring a reasonable price in all sales. The subject is too serious to be settled or dismissed by a veiled threat offered to just and unjust alike (for I take it that "legally adjudicated" is aimed at the bottles of genuine vaseline), and I venture to express a hope that the company may so far modify their views as to allow the honest retailer to retain the liberty which he has so long enjoyed without protest of packing their preparation in his own style. I would much prefer to sign my own name to this letter, but a not unreasonable objection to being mixed up in any "legal adjudication" counsels me to remain—for purposes of publication, if you think fit—simply yours in the abstract,

FAIR PLAY. (19455)

P.S.—Rather than discontinue the sale of my own bottlings of vaseline, I am buying in 1-lb. tins and filling therefrom: and I shall, therefore, personally welcome the reappearance of the 5-lb. tins at the 5-lb. price.

A correspondent in the North sends us a letter, to which he signs his name and address, boldly announcing his intention to put up some other make of petroleum jelly, and to label it "—'s Vaseline." This may be heroic, but it is not business, and the publication of the letter even would justify the Chesebrough Company in applying for an injunction against the writer and saddling him with heavy costs. We do not think there is any doubt about the company's absolute right to the exclusive property in the word "vaseline," and we certainly shall not publish any letters which recommend, directly or indirectly, any tampering with such rights. We are sorry to receive letters of the kind.—ED. C. & D.

Stokes' Liniment.

SIR,—In last issue I noticed a communication from Mr. Madden, Belfast, re "Stokes' Liniment."

Allow me to say that the following formula has been used in the North of Ireland, at least, for some.

Take of—

Turpentine	..	..	..	..	1 gi℥
Acetic acid	..	..	..	..	1 "
Yolk of one egg.					

Mix thoroughly.

21 Brougham Street, Belfast, Sincerely yours,
December 21. S. H. (193/35.)

DISPENSING NOTES.

The opinion of practical readers is invited on subjects discussed under this heading.

Bismuthi Subnitras et Sodii Bicarb. in Mixtures.

SIR,—I quite agree with your comments on the subject of bismuth.

Relieve me, faithfully yours,

10 Stratford Place, W., T. LAUDER BRUNTON.
December 19.

Dr. Mitchell Bruce presents his compliments to the Editor of THE CHEMIST AND DRUGGIST and is much pleased with the letter and comments thereon.

70 Harley Street, W., December 20.

SIR,—We are in the habit in the Laboratory of Pharmacy of experimenting on pharmacopoeial processes which seem open to amendment, and on dispensing difficulties real or supposed.

With regard to the latter, no method is allowed to stand good which in any way depends on the substitution of one ingredient for another.

I think that a dispenser is not justified in substituting the subcarbonate for the subnitrate in order to avoid decomposition. This would tend to establish a dangerous precedent.

Some sessions back we prepared the bismuth mixture by adding the alkaline salt in solution at the end; but as, on keeping, decomposition, though retarded, eventually took place, we put the subnitrate with half the sodii bicarb. in a warm mortar and forced effervescence with a small quantity of boiling water. The mixture was then made, with the exception of the remaining alkali, which was added finally in solution.

I think the suggestion that one-fourth instead of one-half alkali is an improvement. Should tragacanth be used for suspension and any alcoholic preparation be also present, we combine these two and form them into mucilage of tragacanth—a dispensing method to which there appears to be no exception.

In all cases, we keep and carefully watch any doubtful preparation for a period of five months before it is allowed to pass into class-teaching without further comment.

December 21.

JOSEPH INCE.

The most satisfactory way is to send the separate alkaline mixture with the bismuth trisnit.

A WEST-END CHEMIST. 192 24.

SIR,—The teaching of the "Art of Dispensing" on this point is, I think, seriously at fault. For instance, in the following prescription:—

Bismuthi subnit.	..	..	..	..	3i℥j.
Potassii bicarb.	..	..	..	..	3i℥j.
Aquam dest. ad	..	..	..	..	5vj.

This would quickly burst any closed vessel weaker than a soda-water bottle; to say that the substitution of carbonate of bismuth for the subnitrate "cannot be followed without sanction" of the prescriber, is simply to talk nonsense; and "to place the subnitrate and bicarbonate in a mortar and pour a little boiling water upon them" is still more ridiculous, for the reaction, if completed, would produce approximately—

Bismuthi subcarb.	..	..	..	..	3i℥ss.
Potas. subcarb.	..	..	..	..	5i℥ss.
Potas. nitratis	..	..	..	..	3j.
Aquam dest. ad	..	..	..	..	5vj.

This I should characterise as a gross form of blundering, not likely to receive the sanction of the prescriber if he knew anything of chemistry. There is some philosophy in your editorial note advising heat only for the bicarbonate required for the reaction; but how does it ease your conscience to manufacture the carbonate instead of starting with the same already made, and by whose authority do you diminish the bicarbonate and add the sodium nitrate resulting from your manufacture?

I submit the following as common-sense procedure:—When, as frequently occurs, sal volatile is ordered or any other compound which readily absorbs CO₂, dispense as written; also when the bism. subnit. does not exceed 10 grains to the ounce, or when the sodium bicarbonate is under 3 or 4 grains to the ounce, dissolving the soda completely before adding the bismuth. All bismuthi subnit. over 10 grains to the ounce (unless the bicarbonate is under 3 grains) should be replaced by carbonate.

Bicarbonate of potassium attacks the subnitrate much more vigorously than the sodium salt. It is therefore safer to replace all subnitrate over 5 grains to the ounce by carbonate in presence of KHCO₃.

I consider it needless to trouble the prescriber about a chemical point with which he is probably imperfectly acquainted, when the pharmacist's special education in chemistry necessarily makes him the superior authority.

Yours very truly,

35 Clifton Road, Maida Vale, W. R. H. PARKER.

193. *P. J.*—Heaped-up teaspoonfuls of bismuth subnitrate are frequently prescribed. We have dispensed the bismuth in pound lots to be given in this way.

162/22. *G. W. J.*—Yes, a very good translation.

189/28. *W. E.*—With anhydrous lanoline you will have no difficulty in incorporating its own weight of water. You should use a slab and a spatula. Or you may use 5v. of aqueous lanoline, plain water, and a proper amount of concentrated rose-water.

192/3. *Dandy Tiger.*—The difficulty is dealt with on page 562.

LEGAL QUERIES.

Consult *Alpe's "Handy-book of Medicine-stamp Duty"* in regard to patent-medicine questions.

General information regarding the laws affecting chemists and druggists is printed in *THE CHEMISTS' AND DRUGGISTS' DIARY*, 1892, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the *DIARY* pp. 151-9.

190/18. *Pyro.*—You could not get the words "balsamic cough-mixture" registered. It would be very unreasonable to give to anyone the monopoly of such a title.

190/22. *Accurate* asked a firm to whom he sent a cheque to receipt his invoices. This they declined to do, but sent him a separate stamped receipt. He asks, Can he demand a receipt in a certain form, and, if so, what steps should he take to compel them to receipt his invoices? He can make the demand, but he cannot enforce it. The law requires that a receipt shall be given for certain payments, and when a person has fulfilled the law he cannot be made to do more.

189/62. *M.P.S.* 1851 writes in support of the same idea as that advocated by Mr. Allen last week—namely, that tradesmen should have some better means of ascertaining when an exclusive right to a title is claimed than power to search a register. "I venture to suggest," he writes, "that every advertisement or other use or exhibition of a trade-mark should in future have annexed to it 'registered' or an equally distinctive sign that it has been appropriated, and let no action at law be tenable unless this condition has been fully observed." If this proposition could be adopted the result would be an official invitation to everybody to imitate or adopt any title which has not been registered, and it must be remembered that there are many titles not registrable but which it would be by no means fair to copy. We are quite aware that our correspondents do not intend this effect, but if they will consider, they will see that their proposition would lead to it. Nor would the proposal yield the protection sought for. It might be possible to require every trade-mark owner to add "registered" to his trade-mark every time he names it, but it would hardly be possible to compel everybody else to obey such an injunction. For example, how could it be demanded that no journalist should ever mention "Pears' Soap" without adding "registered"?

193/13. *G. D. Co.*—You had better make an apprentice of the boy, but to make the contract effective the boy's parent or guardian should be joined in the agreement, and should sign it. It is desirable to state a moderate penalty

which the parent will have to pay in case the boy should not fulfil the contract. You can agree to pay wages.

163/40. *B. W.*—The United States post-office assesses the value of foreign books sent through the post-office to addresses in the States, and charges 25 per cent. of that value on delivery. We understand that, under the McKinley tariff, it is claimed they have the power to charge the assessed value plus the duty, but we have not heard that they have yet enforced this claim.

192/55. *Francais.*—To make trade-mark searches you must apply personally at the Trade Marks Office, Southampton Buildings, Holborn, and pay 1s. per quarter-hour.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in *THE CHEMISTS' AND DRUGGISTS' DIARY*, p. 317.

For all particulars regarding Educational and Examination matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

157/5. *A. W.*—(a) We do not quite understand this question. Is it a paint you want, or a mordant? (b) By photography. (c) See page 422 of the current volume.

186/13. *Microbe.*—(1) We have no such formula, and should think it impossible to get a preparation of roses which will not change colour on the addition of acids or alkalies. (2) The Yellow Oil is a preparation of turmeric, we believe—that is, a spirituous extract dissolved in oil. Annatto seeds should be used, not the roll annatto; but oil-soluble aniline orange gives the best results.

186/30. *A. E. W.*—Phosphine, used for colouring egg-powder, &c., is hydrochlorate of chrysianiline, $C_{20}H_{11}N_3HCl$. You should buy it.

188/47. *Bullock.*—We do not understand what formula you are referring to. It is quite probable that calf food may be cooked in the same way as infants' food, so as to ensure assimilation.

184/19. *S. M.*—The tr. cisticifuge is the main cause of the deposit. It always gives muddy aqueous mixtures, although it is a good thing for gout and rheumatism. Better let the formula stand as it is. It would be difficult to improve upon it, and if you make a few pints of the mixture, and set aside to clear before bottling, you will get over the difficulty.

188/64. *Sigma* asks:—How much arseniate of soda in crystal is equal to 4 minims of liquor arsenicalis? *Answer*: 0.14 grain of $Na_2HAsO_4 \cdot 12H_2O$ (i.e., the freshly crystallised arseniate).

183/61. *Subscriber* (Glasgow)—A little pectinous matter is probably precipitated in the mixture—certainly no active constituent. Solutions of quinine, like those of other alkaloids, are apt to become fungoid. A little spirit of chloroform prevents this.

187/29. *Deodorant.*—If you go up the whole gamut of disinfecting agents we think you will have no difficulty in concluding that what you are seeking is, in our present state of knowledge, an impossibility.

189/1. *Arsenic*.—(1, 2, and 3) No. (4) If you want to obtain aluminium from sulphate of alumina, you must use sodium or the electric current. We cannot explain the details in the compass of a Correspondence reply. You should read the description of Castner's process in THE CHEMIST AND DRUGGIST, March 12, 1887.

187/70. *P. J. F.*—The use of chestnut hair-dye for dyeing the hair of the slate-coloured dog might suit your purpose, but we do not advise you to try the experiment. Doggie would be sure to lick himself; then you might have a different kind of die to reckon with.

190/9. *Junior*.—We have seen St. Jacobs Oil made; but it would be, to put it mildly, not very honest for us to tell what is in it.

188/68. *W. H. B.*—*Magic Snuff*.—Powdered carbonate of soda. Some common salt added to it does no harm, but good.

189/34. *Botanic*.—See Stevenson & Howell's "Aërated Beverages," &c., for directions as to the manufacture of herb beer.

190/5. *Nemo*.—(1) To Dye Dried Grasses, first bleach them with weak solution of chlorinated lime, exposing to the air, then simply dip in solutions of aniline dyes of the desired colours. (2) We think the lotion would irritate; but why not try it?

191/45. *G. D. C.*—*Ballroom Powder*.—You may use more French chalk, say 3 parts to 1 part of spermaceti. It is altogether a question of price.

181/291. *E. S. V.*—(1) As 2 oz. of iron are contained in 10 fl. oz. of *Liquor Ferri Perchloridi Fortior*, there should be little difficulty in making the calculation. As $\text{Fe}_2 (= 112) = \text{Fe}_2\text{O}_6 \cdot 12\text{H}_2\text{O} (= 541)$, therefore 1 part of iron is equal to 483 parts of solid ferric chloride (12 aq.), or 10 oz. of the solution contain 9.66 oz. of the chloride. From this you can make any calculation. (2) Queen Elizabeth died, we think.

192/39. *J. S.* (Glasgow).—For full details regarding the Manufacture of Starch, you should get the 2s. part of Spon's Encyclopedia dealing with that subject. There you will get the details much more fully than we can possibly give.

192/24. *Salicylic*.—The reason why we think the salicylic corn cure not good for soft corns is because we have seen irritation set up by it, owing possibly to careless application; nevertheless that is a circumstance that the retailer should consider.

192/15. *Subscriber* (Birmingham).—Gorham's book on Tooth Extraction will suit you. See DIARY book-list.

193/40. *Mac*.—The Strength of Brine can be readily determined by its specific gravity, using a hydrometer. Any maker of these instruments would doubtless supply you with an instrument marked in percentages, or so much of the common salt to the gallon. The following are a few of

The Percentages	and	Specific Gravities
5 per cent. NaCl..	1.035
10 " " " " "	1.072
15 " " " " "	1.111
20 " " " " "	1.150
25 " " " " "	1.191

There is another simpler enough way: evaporate a known quantity of the brine and weigh the residue.

193/34. *Canella Alba*.—You can only stop fermentation in wines, &c., by Pasteurisation; that is, heating carefully to the boiling point in order to kill the ferment.

190/68. *American Subscriber*.—*Waterproof Drawing Ink*:—

White wax	8 oz.
White soap	3 oz.
Melt and mix thoroughly, stirring in Lampblack	1 oz.
Heat strongly and add Shellac	2 oz.

Continue the heat and stirring until the whole is well combined.

This ink is to be rubbed down with a little water when required for use.

190/52. *S. H.*—See the index.

191/52. *G. B.*—Thanks. We have used.

Information Wanted.

190/23. Formula for Altona drops.

192/65. An oil called "Linsodine"—maker or seller of.

PREPARATIONS FOR CLEANING MARBLE.—Mix together soft soap 4 oz., whiting 4 oz., soda 1 oz., and a piece of stone blue the size of a walnut; rub it over the marble with a piece of flannel, and leave it on for twenty-four hours; then wash it off with clean water, and polish the marble with a piece of flannel or an old piece of felt. To take stains out of white marble, take 1 oz. of ox-gall, 5 oz. of lye, 1 oz. of turpentine; mix and make into a paste with pipeclay; put on the paste over the stain, and let it remain several days. To remove ironmould or ink-spots put $\frac{1}{2}$ oz. of butter of antimony and 1 oz. of oxalic acid in a pint of rain-water; add enough flour to bring the mixture to a proper consistency. Lay it evenly on the stained part with a brush, and after it has remained for a few days wash it off, and repeat the process if the stain be not wholly removed.

EDISON ECLIPSED.—Professor Richard de Long, of Stoughton, Dane County, Wisconsin, is a tall pale faced man, with a three-storey, bay-window forehead, overhanging a fair of deep-set sky-blue eyes, set on each side of a large thin hooked nose. He is not a beauty, but he is a genius, for he has invented the feline motor, which extracts the electricity from cats. The machine is a curious combination of large and small fly-wheels, great balance-wheels, bright steel rods, and an almost innumerable number of coils of copper wire, all joined to a brightly polished cylinder of brass, one end of which projects into a wire cage filled with ordinary cats. Its operation is very simple, but surprising in its results. A slight pull on a small nickel-plated lever starts the machine. Then like lightning from out the end of the cylinder projecting into the cage there shoots a long steel arm and hand, grabbing one of the cats by the nape of the neck and yanking it into the cylinder, where it disappears with a yowl of more than feline terror. In a moment the fly-wheels, the great balance-wheels, and all the complicated machinery begin to move, at first slowly, but soon with startling rapidity. At the proper moment, which is indicated by a small clocklike attachment, the operator pulls another lever, when the cat—hair and tail erect, scintillating eyes, and a dislocating caterwaul—disappears into a tub of cold water prepared for its reception. This operation, surprising as it may seem, extracts from the cat electricity equivalent to the power represented by ten horses working for one hour, and this power can be stored in the cylinder until needed. As a cat can be run through the motor every three minutes, and all the accumulating electricity be stored, the power of the machine is practically limitless. The same cat can be used once every ten hours without in the least impairing its health and general usefulness. The *New York Sun* has it so.

Pears' Soap



(25 inches high.)

These celebrated Statuettes are supplied free to Retail Buyers upon conditions to be obtained on application to

A. & F. PEARS,
71-75 New Oxford Street, W.C.

THE

“STANDARD OF QUALITY”

ESSENTIAL OILS

MANUFACTURED OR SELECTED BY

DODGE & OLCOTT,

NEW YORK, U. S. A.

ESTABLISHED 1798.

OILS BAY, CARAWAY, CLOVES, CUBEBS, PEPPERMINT, SANDAL.
SASSAFRAS, SPEARMINT, TANSY, WINTERGREEN,
WORMWOOD AND MANY OTHERS.

AGENTS FOR THE UNITED KINGDOM—

ASHMORE & SON,

AGENT FOR THE CONTINENT OF EUROPE—

CHAS. WESTPHAL,

195 Upper Thames Street,

London, E.C.

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50 HOLBORN VIADUCT, LONDON, E.C.,

December 26, 1891.

WHOLESALE HOUSES

throughout Great Britain and Ireland, the East Indies, and the British Colonies, also the Wholesale Houses of the United States, and the Continent of Europe,

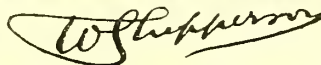
WILLING TO PUSH

CAFFYN'S LIQUOR CARNIS MALTO CARNIS,

AND

ALLIED PRODUCTS OF RAW BEEF,

ARE INVITED TO COMMUNICATE FORTHWITH WITH

THE LIQUOR CARNIS CO., LTD.

MANAGING DIRECTOR.

NOTE.—Caffyn's Liquor Carnis, Malto Carnis, and Allied Products of Raw-Beef-Juice are prepared from British Beef only, in London, at the Laboratories of The LIQUOR CARNIS CO., in Farringdon Street—Smithfield Works—close to Smithfield Market.

Chemists who would care to receive a supply of articles similar to the subjoined on paper or card with name and address (send label) are asked to drop us a post-card, and to give name of Carrier Company or House in London for enclosure.

INDIGESTION.

Dyspepsia or indigestion, one of the commonest ailments of life, is due to several causes, among which we find imperfect mastication, owing either to bad teeth, or to the hurry in which so many of us take our meals, and the unsuitability of the food taken. With many persons, in whose case no such cause can be found, the indigestion is often chronic, due to bad habits formed early in life, to the mistaken kindness of our parents, or to our own juvenile fondness of all sorts of unwholesome delicacies. Of these causes, some may be removed without very much difficulty—a visit to the dentist and careful attention to thorough mastication will do wonders with many persons. Others, again, should exercise more discretion in the choice of their food; late lobster suppers and vagaries of that nature should be avoided. But what for the chronic dyspepsia? Those who suffer daily from stomach-ache, nausea, and wind? Various common household drugs will afford relief for the time, but no one really cares to be always drug drinking, and we therefore look about for some form of food which will not give us pain and flatulence, but which will make us stronger and able in time to take ordinary meals with comfort and enjoyment. Such a preparation has been lately offered to us in the form of *Caffyn's Jelly Carnis. It can be either eaten cold as a Jelly or warmed as beef-tea. It contains two-thirds of its bulk of †Liquor Carnis Caffyn, the pure juice pressed out of the best beef. This is infinitely better than ordinary beef-tea or any extract of meat, which only contain the stimulating elements of muscle, whilst Liquor Carnis, being prepared in the cold, contains also the albuminoid of true food elements. It has no irritating properties, is very pleasant to take, and is quickly digested by even the weakest stomach. Looked at from all points it is an ideal food, and should be a very great boon to a large number of sufferers.

* Caffyn's Jelly Carnis contains two-thirds (66%) of Liquor Carnis (Caffyn), and possesses all the stimulating substances characteristic of ordinary beef-essence and Liebig's Extract of Meat, as well as the soluble albuminoids (nourishing material) present in raw meat-juice. May be eaten cold as a "jelly," or taken hot in the form of "beef-tea."

† Caffyn's Liquor Carnis (Beef Juice).—A nourishing fluid consisting of Uncooked Juice of Meat or Muscle-plasma, permanently preserved by the addition of a definite quantity of a Carbohydrate. A valuable food and tonic for infants and invalids.—"The British Medical Journal."

CRESCENT



BRAND

BICARBONATE OF SODA,

REFINED AND RECRYSTALLIZED.

PURE AND CHEAP:

ANALYSIS.

Bicarbonate of Soda	--	--	--	--	--	97.20
Mono Carbonate of Soda	--	--	--	--	--	1.90
Sulphate of Soda	...	--	--	--	--	trace
Chloride of Sodium	--	--	--	--	--	.035
Moisture	...	...	...	...	...	.82
Insoluble	...	...	...	...	...	nil

PURE ALKALI,

GUARANTEED 58 DEGREES.

EQUAL TO 98 PER CENT. OF CARBONATE OF SODA.

Most economical form of Soda for the use of Printers, Bleachers, Dyers; Glass, Paper, and Soap Makers.

SODA CRYSTALS

OF THE FINEST QUALITY.

BRUNNER, MOND & CO., LIM.

*Manufacturers of Soda by the Ammonia Process
(Solvay's & Mond's Patents),*

NORTHWICH, CHESHIRE

PEPSINE ("50 Times").

CONCENTRATED ODOURLESS PEPSINE — SCALES
(SOLUBLE) OR POWDER. Price 2/6 per oz.

* * As our brand of "50 Times" indicates, one grain of either will digest 2,500 grains of Coagulated Egg-albumen, showing a strength 50 times greater than that required by the British Pharmacopœia.

COMPRESSED PELLETS.

CHLORATE OF POTASH, 1/2 per lb. ; 7 lbs., 1/ lb. (net).

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COMPOUND SULPHUR PELLETS (Disintegrating), 1/9 per lb. ; 7 lbs., 1/6 lb. (net).

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COATED PILLS (Pearl).

BLAUD'S PILL, 6d. per gross (net). LIVER GRANULES,

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WYLEYS' OVAL GELATINE-COATED PILLS. "Still the best." Useful for Specialities. List on application.

HORSE BALLS. Patent Duraplastic.

"Air-tight, Soluble, Elegant, and Economical."

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24/ per gross. PHYSIC BALLS, 24/ to 30/ per gross.

COUGH BALLS, 24/ to 27/ per gross. List sent. Name and address may appear on each Ball if desired.

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SOLUBLE PEARL COATED PILLS

SPECIAL NET PRICES

FOR

CASH WITH ORDER,

IN TEN-GROSS TINS.

					Per Gross
					<i>s. d.</i>
Pil. Aloes et Ferri, P.B.	..	..	..	..	0 6
.. Colocynth. Co., P.B.	..	..	..	..	0 11
.. Colocynth. et Hyos., P.B.	1 1
.. Rhei Co., P.B.	0 6

APERIENT.

105	..	Each Pill contains $\frac{1}{2}$ gr. of Calomet.	..	0 6
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ANTIBILIOUS.

62 Hydrarg. Pil., Ext. Coloc. Co., Pil. Rhei Co.	..	1 0
262 Podophyllin, Ext. Coloc. Co., Ext. Hyosce.	..	1 2

COUGH.

164 Pulv. Ipecac. Co., Gum. Ammon., Pulv.	..	0 7
Scilla, saponis	..	0 7

CASTOR OIL.

289	0 6
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TONIC.

371	0 6
(Blond's Formula, Martindale's improved.)					

"LITTLE" APERIENT.

458 Aloin, Podophyllin, Ext. Hyosce., Jalapin.,	..	0 5
Ext. Nucis Vom., Cassia.	..	0 5

Samples of the above, with our Complete List, sent on application.

In ordering, please note Address, and see that the Label on each Bottle or Tin corresponds with the above Block.

DAKIN BROTHERS

(ESTABLISHED 1820).

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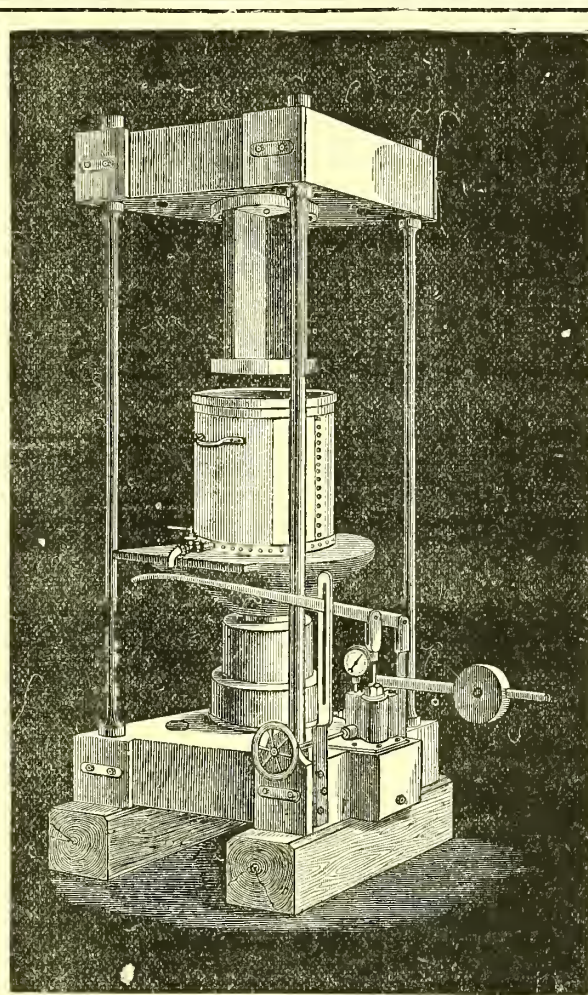
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IN BOND.

DUTY FREE.

The Excise Regulations
allow the Bottles
to be as small as 5 ozs.,
and the
total quantity as little
as 2 gallons.



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UPON
APPLICATION.

We court a comparison
of our
Prices and Preparations
with those
of German makers.

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				1 lb.	7 lbs.
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CHLORATE OF POTASH AND BORAX	-	-	-	1/2	1/-
COMPOUND SULPHUR	-	-	-	1/2	1/-
SODA BICARB.	-	-	-	1/2	1/-
SODA MINT	-	-	-	1/2	1/-

NET CASH WITH ORDER.

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DIGESTIVE FERMENTS.

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For "charts" and other dry forms. An absolutely permanent Pepsin, free from all foreign odour and taste. Digestive power, 2,500 times its weight.

In 1-oz., 4 oz., and 8-oz. Bottles and 1 lb. Tins.

No. 2.—SCALE PEPSIN & THE SAME POWDERED (*Soluble*).

Especially useful in preparing liquid forms. Soluble in water, and absolutely free from objectionable odour and taste.

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Digestive power, 2,500 times its weight.

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No. 3.—GLYCEROLE PEPSIN (*Concentrated*).

A clear and permanent glycerin solution, 10 minims of which are the equivalent of 1 grain of our scale pepsin, possessing a digestive activity of 2,500.

This fluid pepsin is admirably adapted for use at the prescription-counter and in the pharmaceutical laboratory, in that it obviates the necessity of weighing and filtering when preparing liquid combinations.

In Pint Bottles and 2-gallon Jugs.

Combines elegance of preparation with prompt and certain action. ARMOUR'S GLYCEROLE PEPSIN is the ideal liquid Pepsin.

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A convenient dosage form.—Each Tablet contains 3 grains ARMOUR'S PURE NON-HYGROSCOPIC PEPSIN.

In Flat Bottles for Pocket, each containing 75 Tablets. Put up in Cases containing One Dozen Bottles.

No. 5.—PURE PANCREATIN in Powder.

For internal administration.

In 1-oz. Bottles and 1 lb. Tins.

No. 6.—PEPTONISING TABLETS of Pure Pancreatin and Sodium Bicarbonate.

For peptonising milk and other foods for infants and invalids. Each Tablet contains 2½ grains pure Pancreatin, and 8 grains Sodium Bicarbonate.

These Tablets will be found uniformly reliable.

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Recipes for pre-digesting foods are furnished with every bottle.

No. 7.—GLYCERINE SOLUTION OF RENNET.

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—POWDERED RENNET.

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For Curdling Milk.—Formulas supplied for making Essence of Rennet.

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ARMOUR'S PROCESS retains the True Natural Flavour of Fresh Beef, and its Stimulative and Nutritious Properties. It is guaranteed to be Pure Beef Essence, and invalids relish it when all other forms of nourishment nauseate. Gold Medals and Highest Awards at all Exhibitions. Adopted by H.M. and U.S. Governments, also for Hospital use. Packed in ½, 1, 2, 4, 8, and 16 oz. jars.

Supplied in tins in limited quantities to our customers for compounding.

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A fluid preparation made from ARMOUR'S EXTRACT OF BEEF, further strengthened in muscle-forming constituents by the addition of Pure Beef in Powdered Form, and suitably seasoned. In 2, 4, 8, and 16 oz. bottles.

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HEWLETT'S MIST. PEPSINÆ CO. C. BISMUTHO.

Highly recommended in various forms of dyspepsia, having a direct action upon the mucous membrane of the stomach and intestines as a sedative. It can be administered with marked and almost instantaneous effect in the irritative form of dyspepsia more especially when *pyrosis* is a conspicuous symptom, and pain occurs an hour or more after food. In simple neuralgic gastric pain following eating, occurring in feeble subjects, it is especially indicated, and even in *carcinoma* it has been used with great success in alleviating pain and vomiting.

In the dyspepsia of patients dependent upon some organic disease, and where there is a decided loss of nerve power, it is of singular service. Thus, for instance, a person after a meal complains of a peculiar gnawing and emptiness, with slight pain at the epigastrium, evident signs of general relaxation and loss of nerve power, clinical experience has shown that it is of great service as a tonic and stomachic. A portion of its value arises, it may be, from its action upon the spinal motor nerve centres. Be these things as they may, experience has abundantly demonstrated the value of the compound as a stomachic, anti-dyspeptic, and tonic, in general functional atony and relaxation, and in the various forms of dyspepsia, constipation, or diarrhoea, connected with atony of the visceral muscular coat, the Mist. Pepsinæ Co. c. Bismutho is a very valuable remedy. In the *exhausting purging of Phthisis*, accompanied with night sweats and restlessness, Dr. MATHEWS, of Nantwich, has used it with marked and appreciable effect.

Price (in England) 10s. 6d. per pound.

Physicians will oblige, when ordering Mist. Pepsinæ Co. c. Bismutho, by writing Mist. Pepsinæ Co. (Hewlett's).

Packed (for Dispensing only) in 10-oz., 22-oz., 40-oz., and 60-oz. Bottles.

LONDON MEDICAL RECORD REPORT.

MISTURA PEPSINÆ COMPOSITA CUM BISMUTHO.

"This combination of Messrs. HEWLETT is one which has been extensively tested, and with good results. It is justly popular in the profession as a very valuable and effective combination. It serves not only to improve appetite, but to lessen the gastric pain and to facilitate difficult and painful digestion, without setting up any evils of its own. It is a very good crutch for persons of weak stomach to lean on."—January 15th, 1881.

O. J. HEWLETT & SON.

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Established 1832.

Schacht's Preparations.

SCHACHT'S LIQUOR BISMUTHI.

Absolutely pure. The original preparation, invented and introduced to medicine by Mr. Schacht in 1855. Its distinct superiority is universally admitted. In $\frac{1}{2}$ lb., 1 lb., 2 lb., and 5 lb. bottles. Dose: 1 drachm diluted. When ordering, please to specify "SCHACHT'S."

SCHACHT'S LIQ. BISMUTHI SEDATIVUS.

Contains pure Bismuth and *Pepsina Liquida* in combination with sedatives. A formula most serviceable in the treatment of gastric pain. In 4 oz., $\frac{1}{2}$ lb., and 1 lb. bottles.

SCHACHT'S SYR. CINCHONÆ ALCOHOLICUS.

A standard preparation, of definite alkaloidal strength, containing the entire medicinal properties of the finest Cinchona Bark. It is, in fact, Bark minus the woody fibre, and its efficiency has been proved by careful medical enquiry. Dose: Ten to sixty drops.

SCHACHT'S PEPSINA LIQUIDA (REGISTERED TITLE).

Fluid pepsine of extraordinary activity—tasteless, odourless, attractive to patients, and reasonable in price. Every teaspoonful when tested by the official B.P. process is guaranteed to effect the solution of 1,000 grains of albumen. Peptic power is the only test of value. Most of the foetid and repulsive dry Pepsines have proved worthless. In 4 oz. bottles, 2s. 6d. each; and larger sizes for dispensing at a cheaper rate.

SCHACHT'S PEPSINA LIQUIDA C. BISMUTHO.

Each drachm contains in a concentrated form, besides the fluid pepsine a full dose of Schacht's Liquor Bismuthi. Dose: One drachm. In $\frac{1}{2}$ lb. and 1 lb. bottles.

N.B.—Peps. Liq. c. Bismutho Co. contains, in addition, one gr. soluble Euonymin in each drachm.

SCHACHT'S PEPSINA LIQUIDA C. EUONYMIN.

Each drachm contains one grain of soluble Euonymin. Dose: One drachm. For dispensing $\frac{1}{2}$ lb. and 1 lb. bottles.

SCHACHT'S LIQ. PODOPHYLLI C. BISMUTHO.

A perfect solution of Podophyllin, containing $\frac{1}{2}$ gr. in each drachm.

SCHACHT'S LIQUOR CASCARÆ DULCIS.

A pleasant and active form of Cascara Sagrada. Dose: One to three teaspoonfuls diluted. In 4 oz., $\frac{1}{2}$ lb. and 1 lb. bottles.

SCHACHT'S INFALLIBLE RENNET.

An entirely new Essence, perfectly reliable, for the coagulation of Milk, and the production of Junkets and Curds and Whey. It is a preparation of the most wholesome nature, that contains no salt, and has no special taste, smell, or colour. In large bottles at 1s. of all Chemists. This Essence keeps well in any climate.

The above Preparations can be procured from Messrs. Barclay & Sons, W. Edwards & Son, and the Wholesale Druggists; or direct by post from

GILES, SCHACHT & Co., Clifton, Bristol.

—“PREMIER”— EXTRACT OF MALT

MANUFACTURED BY
RAIMES, CLARK & CO.==
==EDINBURGH AND YORK.

We manufacture the “PREMIER” MALT EXTRACT *in vacuo* from the best Scotch barley, the temperature during evaporation never exceeding 120° F. Special temperatures are also observed during the entire process, and the greatest care has been bestowed on the erection of special plant and other numerous details of manufacture, whereby the diastase is preserved unaltered, and the albuminoids are retained in a soluble form.

Certificate of Analysis from Dr. W. Johnstone, F.I.C., F.C.S., F.G.S., London.

I HEREBY certify to having made a careful analysis of a Sample of the “PREMIER” MALT EXTRACT, and find it possesses the same nutritive and diastatic properties of ordinary Malt, but that in a highly concentrated form.

It contains a high percentage of the nitrogenous and phosphatic constituents of the cereals, rendering it unequalled as a digestant.

It possesses the following advantages:—

It is richer in diastase than any other Malt Extract I have examined.

It is highly palatable, and keeps perfectly, retaining the diastatic and nutritive properties of malt, rendering it a most valuable strengthening preparation.

WILLIAM JOHNSTONE, Ph.D., F.I.C., &c., &c., *Public Analyst.*

Sold in bottles to retail at 1/, 1/6, and 2/ each.

Supplied also in bulk.

Samples and quotations on application.

Established
1848.

THOMPSON & CAPPER,

WHOLESALE & EXPORT HOMŒOPATHIC CHEMISTS,

Established
1848.

55 BOLD STREET, LIVERPOOL,

AND

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ILLUSTRATED PRICE LIST ON APPLICATION.

THOMPSON & CAPPER'S DENTIFRICE WATER.

Sells well everywhere, its beneficent qualities being attested to by physicians in all parts of the world. (*See Testimonials.*)

In 1s. 6d., 2s. 6d., 4s. 6d., and 8s. 6d. Bottles.

DUNCAN, FLOCKHART & CO.,

WHOLESALE AND EXPORT DRUGGISTS, EDINBURGH.

CHLOROFORM

(DUNCAN'S),

Prepared from Pure and Methylated Spirit, also Chloroform (blue label).

Put up in all sizes of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle. For Export, in bottles corked and luted (stoppers attached), and in hermetically sealed flasks when required.

N.B.—We guarantee all our Chloroforms to be PURE CHLOROFORM, answering all the tests of the British Pharmacopœia.

CHLORIC ETHER

(DUNCAN'S).

This is a special preparation, quite different from Spir. Chloroformi P.B., perfectly miscible with water, and always of the same strength.

SYMES & CO. LIVERPOOL

PHARMACEUTICAL CHEMISTS, EXPORT DRUG MERCHANTS,

IMPORTERS OF BRAZILIAN DRUGS, AMERICAN AND CONTINENTAL SPECIALITIES.

ORIGINATORS AND

OL. LAVAND. RECT.

Largely replacing the Mitcham Oil, 21/ lb.

Hydrobromic Syrup of Hypophosphites.



LAC BISMUTHI.

MANUFACTURERS OF

OL. LIMONIS RECT.

Fine quality, keeps well. 6/ lb.,
Bottles Free.

Lac Bismuthi et Ceril, &c

Trade Notice.



[Trade Notice.]

ATKINSON & BARKER'S ROYAL INFANTS' PRESERVATIVE.

Established by 90 years' experience as a safe and effective Medicine.

Sold universally by Chemists and Patent Medicine Dealers.

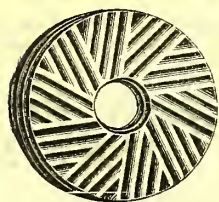
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In all its branches by Patent and Improved Steam Machinery.



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MANUFACTURING CHEMISTS, WHOLESALE AND EXPORT DRUG MERCHANTS,
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Manufacturers of all Pharmaceutical Preparations on the best and most improved principles. Quotations on Application
DEALERS IN PURE CHEMICALS

For Medicinal, Photographic, and Commercial purposes.

Importers of Cod Liver, Castor, and
Olive Oils; Extra Super Essence of Lemon
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Special Agents for Sicilian Sublimed Sulphur
in 2-cwt. bags, and Rolled Sulphur in 3-cwt.



Essential Oils; Valerian Saffron; Vanillas;
Fruit Essence; Carmine; Aniline Dyes;
Bees' Wax, &c., &c.

casks. Most Favourable Quotations can be given
to large Wholesale Dealers on application.

ARTHUR S. HILL & SON

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"Signed) J. W. HALL"

Sworn at 16 Berners Street, in the County of Middlesex, this 3rd day of December, 1891.

(Signed) T. C. FENWICK,

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Whilst relieving local trouble,
Builds up and Braces
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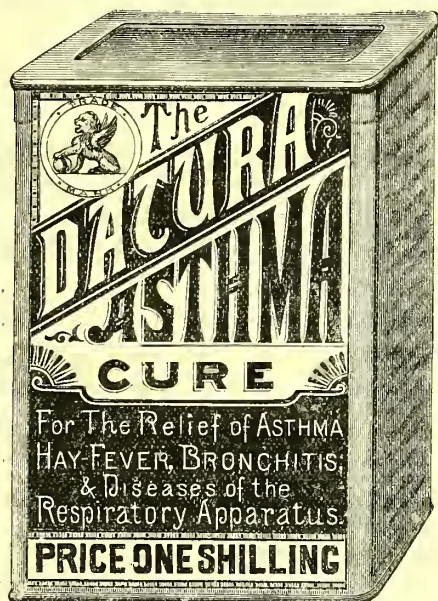
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Pure Extract Pepsine $\frac{c}{c}$	(French Pharmacopœia) standard 50	26/6 per lb. net.
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FOREIGN MEDICINES AND PATENTS,
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Retail	Per doz.	Retail	Per doz.	Retail	Per doz.	Retail	Per doz.
4/6.. Alool de Menthe Ricques 41/6		4/6.. Capsules Matloo	35/	2/3.. Guyot's Liq. Gendron	18/	2/9.. Rabuteau's Drgées Ferrug 24/6	
2/9.. Ditto ditto	21/	4/6.. " Mathey Caylus.....	35/	9/ " Lavielle's Gout Tincture ..	31/	7/ " " Elixir Ferrug. 65/	
2/9.. Anbergier's Syrup	27/	4/6.. Chassaing's Wine.....	39/	9/ " " Pills	78/	2/9.. Rabuteau's Syrup Ferrug. 24/6	
1/9.. " Pâte.....	15/	2/9.. " " Pills	24/	1 1/4 Papier Fayard.....	6/9	4/ " Racahout des Arabes.....	31/
6/8.. Bay Rum	57/	4/6.. Chin's Dragees Bromide Cam. 45/		2/3.. " Ditto	13/6	4/6.. Reynal's Bougies	38/
3/8.. " Ditto	31/	5/ " Eau de Botot (Genuine)....	40/	2/3.. Papier Fruneau	14/6	2/9.. Ricord's Injection	24/
2/ " Belloc's Charcoal.....	15/	3/ " " Ditto	24/	4/ " " Ditto	24/6	4/6.. " Capsules.....	36/
1/9.. " Lozenges	15/	2/ " Espie's Cigarettes	13/6	1/9.. Pâte d'Anbergier	15/	9/ " " Syrup..90/; 4/8; 42/	
4/8.. Blanoard's Pills	32/	4/6.. Elixir de Coca (Mariani) ..	48/	1/9.. " de Berthé	15/8	1/8.. Star Paper	11/
2/6.. " Ditto	18/	2/9.. Flon's Syrup	23/	2/9.. " de Coca Mariani	25/	1/9.. Vallet's Pills	14/6
4/8.. Brou's Injection	27/	1/9.. " Gayetty's Paper	24/	1/9.. " de Georgé	14/8	2/8.. " Ditto	23/
4/6.. Bugeaud's Wine	36/	2/3.. Granules Arsen. Acid.....	13/6	1/14 " " Ditto	9/	4/8.. Veloutine (White, Pink, Oim.) 28/	
3/6.. Bully's Vinegar	30/	2/9.. " Iron	14/5	1/8.. " de Nafé	13/8	3/6.. " Ditto ditte	22/
2/ " " Ditto	14/6	2/9.. " " Soda	15/4	1/9.. " Regnaud	14/6	2/9.. Vichot's Trochisques.....	22/
4/8.. Caude's (Lait Antéphilic) 38/		2/9.. Grimault's Syrup Lime	24/	7/ " Pierlot's Valerian	60/	4/8.. Vin Mariani.....	36/
4/6.. Capsules Bromide Camph....	45/						

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[1823

PRINTING & DOSING

OF

PILLS & GRANULES

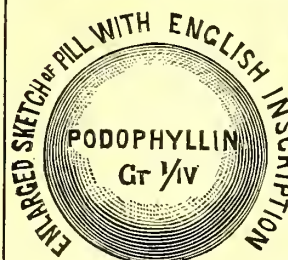
BY

A. CHAMPIGNY et CIE., Successors to MAISON L. FRERE,
19 rue Jacob, PARIS.Received the only Gold Medal given to Pharmaceutical Products at the Paris
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Gold

Also awarded at the International Exhibitions of
MELBOURNE, 1880; AMSTERDAM, 1883; SYDNEY, 1888;
PARIS, 1889.

Medals



The names and weights of the active substances are printed very clearly on each pill or granule. The object of an easily read inscription, such as this, is to obviate those errors which may so easily occur in handling ordinary granules. The seriousness of such mistakes is a direct consequence of the action of the substances employed. The inscription gives every security both to the invalid and the doctor. The process of manufacturing printed pills and granules makes it possible to obtain absolute homogeneous masses, in which the active principles are uniformly distributed and mathematically dosed. The covering is of a nature which preserves the most changeable medicaments, such as iodide of iron, in all climates. All our various pills and granules are further distinguished by the colour of their covering. The printing is done by means of lamplblack, and the colouring matter employed for the coverings is entirely of a vegetable nature.

EXTRACT FROM PRICE LIST FRENCH PHARMACOPŒIA.

NAMES OF SUBSTANCES	Weights		Prices	NAMES OF SUBSTANCES	Weights		Prices	NAMES OF SUBSTANCES	Weights		Prices
	French Milligram	English Grains			French Centigram	English Grains			French Centigram	English Grains	
Amorphous Aconitina ..	1/2	1/120	8	Acetate of Morphia ..	1	1/6	1 3	Cedrina	1	1/6	1 8
Crystallised Aconitina ..	1/10	1/600	8	Salicylic Acid	10	1 2/3	0 7	"	5 1/2	5/12	28 0
Arsenate of Soda	1	1/60	6	Aloes	10	1 2/3	0 7	"	5	5/6	28 10
Arsenate of Strychnia ..	1/2	1/120	8	"Anderson's" or "Scotch Pills" ..	—	—	0 6	Ergotina	1	1/6	0 10
Bi-chloride of Hydrar- gyrum	1	1/60	6	Benzoate of Lithina ..	1	1/6	0 8	"	6	5/6	0 10
Bi-iodide of Hydrar- gyrum	1	1/60	6	Bromhydrate of Quinina	5	5/6	1 3	"	10	1 2/3	0 10
Colohicina	1/2	1/120	8	"	10	1 2/3	1 8	Extract of Belladonna ..	1	1/6	0 7
Acetate of Morphia ..	1	1/60	7	"	16	2 1/2	2 0	Amorphous Quassina ..	1	1/6	0 8
Hydrochlorate of Morphia	1	1/60	8	"	20	3 1/3	2 6	"	2	1/3	0 10
Phosphoric Acid	1	1/60	8	Bromide of Camphor ..	1	1/6	0 7	Santonina	2	1/3	0 7
Phosphuret of Zinc	1	1/60	8	"	6	5/6	0 8	"	5	5/6	0 8
"	2	1/30	8	Caffeina	1	1/6	1 3	Sulphate of Quinina ..	5	5/6	1 3
"	4	1/15	8	Calomel	1	1/6	0 7	"	10	1 2/3	1 8
Fluorotexina	1	1/60	8	"	5	5/6	0 7	"	16	2 1/2	2 0
Crystallised Quassina ..	1	1/60	8	Hydrochlorate of Quinina	5	5/6	1 3	"	20	3 1/3	2 6
Extract of Strophanthus	1	1/60	10	"	10	1 2/3	1 8	Sulphate of Sparteina ..	2 1/2	5/12	0 10
Sulphate of Strychnia ..	1	1/60	8	"	15	2 1/2	2 0				

The preceding list comprises only a very small portion of the Pills and Granules prepared by the Firm of L. Frère. Their complete Catalogue contains the various formulæ of the French Pharmacopœia, also the leading ones of the British Pharmacopœia, as follows:—

BRITISH PHARMACOPŒIA						PRICES			BRITISH PHARMACOPŒIA						PRICES				
						Per Gross	Per lb.	Per Bottle of 50 pills							Per Gross	Per lb.	Per Bottle of 50 pills		
						s. d.	s. d.	d.							s. d.	s. d.	d.		
Aloes Barb.	P. B. gr. iv.	..	..	..	..	1	0	10	4	Ferri Carb.	P. B. or "Female Pill"	..	..	..	1	0	8	0	4
Aloes and Ferri	P. B.	..	..	..	..	1	2	10	4	Blue Pill	P. B.	..	..	..	1	0	10	0	4
Aloes and Myrrh.	P. B.	..	..	..	..	1	7	12	0	Rhei Co.	P. B. or "Compound Rhubarb"	..	..	..	1	4	12	0	5
Asafœtida Co.	P. B.	..	..	..	..	1	4	10	4	Aperients	or "Antibilious Pill"	..	..	..	1	0	10	0	4
Calomel Co.	P. B. or "Calomel Pill"	..	..	..	..	1	2	10	0	Pedophyllin	gr. 1/4 6,000 per lb.	..	..	..	1	2	20	0	5
Colecyth Co.	P. B. or "Colecyth Pill"	..	..	..	..	1	8	16	0	Acid. Arsenios	gr. 1/60	..	..	..	1	0	10	0	4
Colec. and Hyos.	P. B.	..	..	..	..	1	7	13	0	Atropia	gr. 1/60	..	..	..	1	4	32	0	5
Ferri Iodid.	P. B. gr. iii.	..	..	..	..	1	8	16	0	Digitalin	gr. 1/60	..	..	..	1	4	28	0	5

The above are the principal pills in daily use, and these P. B. are made in strict accordance with the formulæ of the British Pharmacopœia. In proportion with the demand, other kinds will be added to our list, at equally low prices.

NOTE.—Beyond the pills and granules mentioned in our price list, we manufacture to order any kind of pill or granule of which the formula may be confided to us, with whatever inscription the client may select. These special orders cannot be undertaken for a less quantity than two kilogrammes (4 lb. 7 oz.). It is also necessary to give (1) the colour selected for the covering, (2) the inscription written very distinctly. This lettering cannot occupy more than 18 European letters. The spaces between the words count as a letter. For the Hindoo languages the number of letters may vary according to the form of type. The price for manufacturing is 18 francs (14s. 4d.) per kilogramme (2 lb. 3 oz.) of pills covered. Our customers can have the raw materials sent to us by a wholesale drug house, or we will undertake to supply them. It is hardly necessary to add that an absolute discretion is guaranteed. The Granules comprise the doses of active principle for $\frac{1}{16}$ milligramme, up to one centigramme exclusively. The Pills comprise all the other doses. Each bottle of Granules contains one hundred granules, viz.: 8 doz. $\frac{1}{4}$. Each bottle of Pills contains fifty pills, viz.: 4 doz. $\frac{1}{4}$.

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Lancet, June 25, 1891; Medical Press and Circular, May 6, 1891;
Edinburgh Med. Journal, September, 1891; Proc. Medical Journal,
February and August, 1891; Medical Annual, 1891; Chemist and Druggist,
August 1, 1891; British and Colonial Druggist, September 13, 1891.

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Powder, Medicated Lozenges, Pills, Tabloids, Liq. Papain
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and also the various Formulæ of the Special Preparations of
JAMES BASS & SONS, HATTON GARDEN,
they are prepared to execute orders for the same, and pledge themselves to supply them in all their integrity.

Specimens of these Preparations have remained in the Museum of Kew Gardens during 28 years without deterioration.

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CLAY'S LAVENDER WATER.

No. 1.—Distilled from English Flowers, 6/- per lb.; Winch., 5/6. No. 2.—Very Choice, 4/3 per lb.; Winch., 3/9.

Manufacturers of all descriptions of

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OXY-IODINE COMPOUNDS.

AS SUGGESTED BY DR. HUGH WOODS.



Liq. Calcis Iodinatæ.—A solution of Hypiodite of Calcium. Very effective in curing Gout, Rheumatism, Syphilis, Strumous or Tubercular Disease, Goitre, &c. Highly antiseptic and deodorant. Dose—M. v to xx. Price, 4-oz. bottles, 1/2; 8-oz., 2/; 16-oz., 3/6

Liq. Potassæ Iodinatæ.—A solution of Hypiodite of Potassium. An extremely powerful safe, and unirritating antiseptic. Useful in same diseases as above. Cures parasitic and other skin diseases. Dose—M. v to x. Price, 4-oz. bottles, 1/4; 8-oz., 2/4; 16-oz., 4/.

Red Oxyiodide of Bismuth.—Very superior to Iodoform. Odourless and unirritating. Powerfully antiseptic. Cures wounds, sores, eczema, intertrigo, chapped hands, sweating feet, &c. Price 1/6 per oz.; ointment (1 in 10), 3/6 per lb.

Yellow Oxyiodide of Bismuth.—An excellent antiseptic application to the throat, nose &c. Very valuable for internal use in cancer of the stomach, gastric ulcer, dyspepsia vomiting, &c. Dose—5 to 20 grains. Price, 1/4 per oz.; ointment (1 in 10), 3/ per lb.

Leaflets descriptive of above, and monthly price current, on application.
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THE DIGESTIVE TABLE SALT.

"PEPSALIA" substituted for ordinary Table Salt (which it closely resembles in taste and appearance), in similar quantities, digests the food with which it is eaten with ease and certainty.

Please note that the present price of Pepsalia is 1/ size 9/6 per dozen net, 105/ per gross net; 2/ size 19/ per dozen net, 110/ per gross net. We have now many hundreds of letters from eminent Medical Men who prescribe Pepsalia regularly, and who highly recommend its use. There is nothing else in the market which can in any way compare with Pepsalia as a digestive agent.



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RHEUMATISM, GOUT, BRONCHITIS, THROAT AND CHEST
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"Pumiline" Essence.—For all Lung and Throat Affections, Bronchitis, Influenza, &c. In Bottles 1s. 6d. and 2s. 6d. each.

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the only Medicine of the kind or name awarded a Certificate of Merit at the Calcutta Exhibition, 1883-4, where all Countries were Exhibitors, and the only Trade Mark—"PHOSPHODYNE"—Registered and Protected under the Trade Marks Act.

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CHEMISTS enclosing Trade Card will be supplied free with a neat Pamphlet for Counter, &c.

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Guy's Tonic is sold Retail at 2/9 per Bottle, Guy's Fruit Pills at 1/1½ and 2/9 per box.

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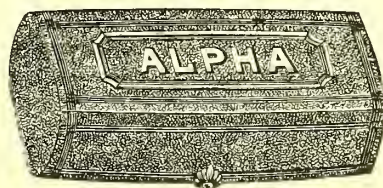
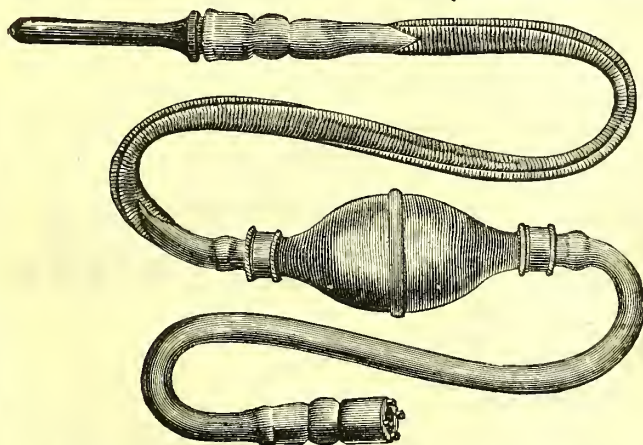
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Beneficial in Cough, Bronchitis (and Asthma), Sore Throat, Influenza, Cold on Chest, Abdominal Pains from Cold, Rheumatism, Gout, Lumbago, Sciatica, Neuralgia, Cramp, &c. A preventive; no poison; never injures, stains, or weakens; no restriction.

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Hook to Hang in Front of Fire.
CANNOT UPSET.

Top of Fire free for other purposes.

TAP FOR HOT WATER.

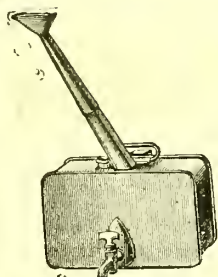
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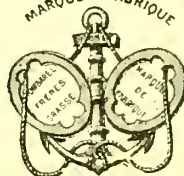
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A SCIENTIFICALLY PERFECT CHEST PROTECTOR must satisfy the following conditions:—

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We invite anyone to test the porosity of "FURFELT" Chest Protectors by blowing out a lighted candle through the fabric.
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THEY ARE MANUFACTURED IN ALL USUAL PATTERNS (SINGLE, DOUBLE, AND VEST SHAPE), SOLELY BY

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AS USUAL!

ALL THE CLOTHES
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Secures the Bed-clothes without
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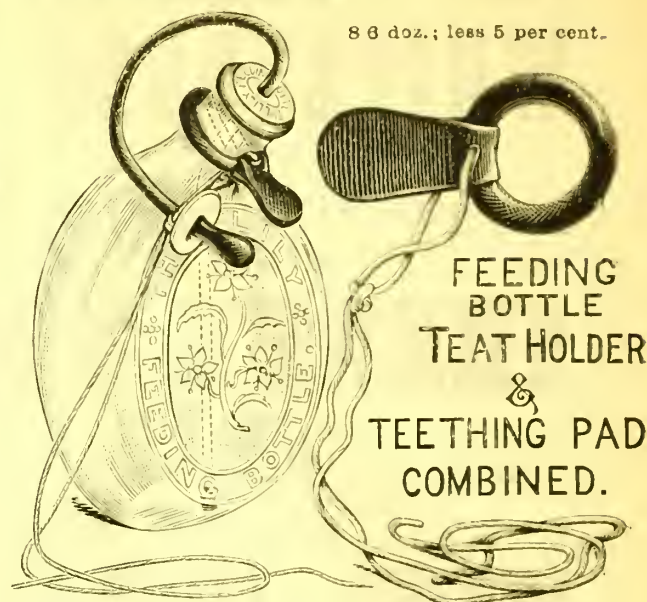
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THE "LILY" (Registered)

8/6 doz.; less 5 per cent.



FEEDING
BOTTLE
TEAT HOLDER
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TEETHING PAD
COMBINED.

BEST WHITE GLASS. BLACK FITTINGS.
SEAMLESS TEAT.

Feeding Bottle Holder, Teat Holder, Teething Ring,
and Pad. All complete for ONE SHILLING.

The Bottle and Teat Holder is sold separately on cards of 1 doz., to retail
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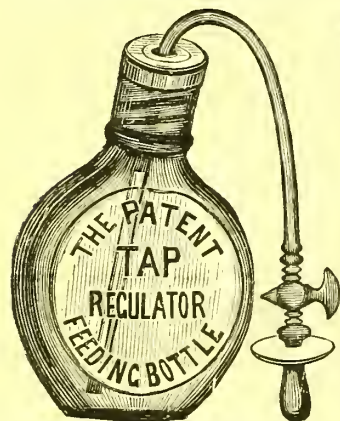
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White Glass Screw-stopper Bottle, Best Black I. R. Fittings, Vulcanite Tap Regulator. Each in Card-board Box, with Tube and Bottle Brush, Complete, 8/6 per dozen.
Ditto, without Box and Brushes, 6/6 per dozen.
Green Glass Screw-stopper Bottle, Best Black I. R. Fittings, and Tin Tap Regulator, 4/ per dozen.
Green Glass, Boxwood-top Cork, Best Black I. R. Fittings, and Tin Tap Regulator, 3/6 per dozen.
Regulators, Vulcanite, 4/ per dozen; pure Tin, 1/6 per dozen.

Cheap Lines for Ordinary Feeders. Write for Price List.

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The Chemist and Druggist

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Businesses for Disposal.
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SATURDAY, DEC. 26, 1891.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

A Copy of this Supplement is inserted in every number issued of "The Chemist & Druggist."

CHRISTMAS HOLIDAYS.

The Offices of "The Chemist and Druggist" WILL BE CLOSED from the Evening of the 24th until the 29th instant.

OFFICES: 42 CANNON STREET, LONDON, E.C.

Advertisements for this Supplement MUST be received at the Office by 5 o'clock p.m. on Thursdays.

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CHEMISTS' TRANSFER AGENTS,

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5.—HOME COUNTY.—Good locality; Mixed Business; old-established concern; situate in a first-rate position; returns between £1,200 and £1,300 yearly; good house and commodious premises; terms, small premium and valuation.

6.—SOUTH OF ENGLAND.—Fashionable town; good-class Dispensing Business; returns £2,000; handsome shop, and good stock; large house, on lease; about £2,000 required; full particulars on receipt of reference.

7.—YORKSHIRE.—Light Retail and Prescribing Business; all cash; returns £700 yearly; situate in a prominent position; handsomely-fitted shop and good stock; very low rental; terms, valuation of stock and fixtures only.

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HULL.—£1,700 returns; good Prescribing and General Retail in prominent position; goodwill £100; stock and fixtures at valuation.

YORKS.—Unopposed Retail, returning in Drugs £700, and in Gilbey's £400; very profitable and capable of increase; price £303.

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Established 1870.

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KENT.—Near town; first-class residential locality; very healthy; Light Retail and Dispensing Business; in present hands 36 years; returns £865; net profit £400; excellent position; price £600.

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EASTERN COUNTY.—Retail, Dispensing, and Agricultural trade; returns £1,500; net profit £450; good house and garden; same hands many years; retiring; price £1,000, or offer.

SUFFOLK.—Unopposed Light Retail, Dispensing, and Prescribing Business; returns £703; net profit £250; rent £31; shop is well fitted in modern style; price £475; recommended.

MIDLANDS.—Retail, Dispensing, and Prescribing Business; returns £800; rent £50; excellent house, with garden, &c.; shop is well-fitted and stocked; price £450, or valuation.

SOMERSET.—Good Market town; old-established Retail, Dispensing, and Prescribing Business; returns £650; rent £30; 9-roomed house; former owner retired; price £450; heavily stocked.

BRISTOL.—Light Retail, Dispensing, and Prescribing Business; returns £600, at full prices; could be trebled if cut; selling through illness; excellent position; price £450.

HANTS.—Unopposed Retail, Dispensing, and Prescribing Business; returns £650; well fitted and stocked shop; good house and garden; price £400, or valuation.

LONDON, N.W.—Retail and Dispensing Business; returns £700; half rent let off; held on lease; double-fronted shop, well fitted and stocked; price £400; must be sold.

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3s. 6d. for fifty words; 8d. for every 10 words beyond.

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FOR disposal, the Business of the late G. B. Howorth, Irthlingboro', Northampton; returns between £7 and £8 per week; handsome fittings; well-assorted stock; no other Druggist; rent £16 10s. per annum; price £150. Address, Howorth & Parkin, Doncaster.

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LANCASHIRE.—Good-class Retail and Dispensing; returns £520; price, valuation of stock and fixtures.

HOME COUNTY.—Light Retail and Dispensing; returns £400; low rent; price £320; large and convenient house, with nice garden.

SUSSEX.—Old-established Retail and Dispensing, with good sale of own specialties; returns £600; price £450; good house and garden.

KENT.—Family and Dispensing trade, with Post-Office; returns over £800; price £600; large house and garden.

DEVON.—Old-established Retail and Dispensing, with good sale of own specialties; returns £600; price £450; good house and garden.

BUCKS.—Light Retail and Dispensing; very low rent; returns £450; price £350; good house and garden; worth attention.

MIDLANDS.—Retail, Dispensing and Prescribing; returns £500; price £200; double-fronted handsome pharmacy.

WEST OF ENGLAND (fashionable health resort). Old-established Retail and Dispensing; returns £1,200; price £1,200.

SURREY.—Light Retail and Dispensing; returns £800; price £650; good house; handsome Pharmacy; agency pays rent.

NORFOLK.—Good-class Family and Dispensing; returns £850; price £200; long lease at a low rent; good house.

CORNWALL.—Retail and Dispensing Business, with general Mixed business attached; returns £3,600; steadily increasing; large house, low rent; price about £1,500; satisfactory reasons for selling.

CHESHIRE.—Old-established country trade; returns £1,000; price, valuation only; large and convenient house; rent £40.

HANTS.—Light Retail and Dispensing; returns £400, and increasing; large and convenient premises, held on long lease at a very low rental; price £200.

LONDON, N. (Main Road).—Good-class Retail and Dispensing; returns £400, and can be doubled with ordinary attention; price £200 to a quick buyer.

LONDON, S.E.—Retail and Prescribing trade; unopposed position; returns £500; price £400; rent £40; good house, &c.

LONDON, N.—Good-class Family Business; Retail and Dispensing; returns about £850 yearly; handsome shop and good stock; price £600.

HANTS.—Light Retail and Dispensing; returns £70, and increasing; large, convenient premises, nice garden; low rent; price £450.

LONDON, S.—Good-class Retail and Dispensing trade; returns £500; low rent; price £350; capital position in marketing thoroughfare.

NO CHARGE TO PURCHASERS.

VALUATIONS A SPECIALTY. TERMS ON APPLICATION.

BUSINESSES FOR DISPOSAL—Continued

A RETAIL Chemist's Business in country town, the centre of a large Agricultural district; good opening for one acquainted with agricultural trade; superior fittings; rent £32; price moderate. Address, L. W. Plummer, Solicitor, Cockermouth.

ON the Lancashire Coast.—A first-class Dispensing and Family Retail Business; very handsome double-fronted shop; mahogany fittings; several proprietary articles, with large and increasing sale; returns £300, at full prices; price £300, including lease. Address, by letter, "Lancs," c/o Crossley, Moir & Co., Advertising Agents, 57A Coleman Street, E.C.

FOR sale by private treaty, two old-established prosperous Drug and Drysaltery Businesses, working admirably in conjunction. Lot 1. Total income, about £350; returns £90, £743, all retail; rent £20. Lot 2. Total income, £550; returns £890 £1,308, all retail; rent £40. Both are in splendid positions, and would be sold separately. Offers considered. Apply, Goodeve & Evans, Cannon Street, Birmingham.

£2,200 returns.—Increasing scapout, in North of England.—A genuine old-established Drug, Dispensing, Prescribing, and Dentistry Business; handsome shop, recently enlarged and refitted; also a Branch Shop in same town; cash required £2,500. Apply, "Balken," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

PARTNERSHIP.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

NOTICE OF DISSOLUTION OF PARTNERSHIP.

NOTICE IS HEREBY GIVEN that the Partnership heretofore subsisting between us, the undersigned, Charles Miller Footitt and Charles Page Dye, carrying on business as Chemists, Druggists, and Tobacco Dealers at Marlow, in the County of Buckingham, under the style or firm of Footitt & Dye, has been DISSOLVED, by mutual consent, as and from the 17th day of October, 1891.

All debts due to and owing by the said late firm will be received and paid by the said Charles Miller Footitt.

Dated this 18th day of December, 1891.

CHAS. M. FOOTITT,
CHAS. P. DYE.

BUSINESSES WANTED.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

Please note that advertisements under this heading must be received at the office not later than 5 p.m. on Thursdays.

WANTED, for the New Year, a genuine Family and Dispensing Business, in good country town, doing £600 to £700, with good scope for increase; no agents need apply. Letters only, to "Associate," care of Townsend, Westcote Street, Holderness Road, Hull.

WANTED, a good General Retail and Dispensing Business in any town along the South Coast; returns £800 to £1200; smaller business will be entertained if scope for increase. Give full particulars, and state lowest cash price (in confidence) to "Krupp," Steyne Mansions, High Street, Worthing.

TENDER.

FOR Sale, by Tender, the Stocks-in-Trade of a Chemist, Druggist, Grocer, and Wine and Spirit Merchant at Conway, N. Wales, inventories of which may be seen at the Office of the Official Receiver, Crypt Chambers, Chester, to whom Tenders should be sent not later than the 9th day of January, 1892; the highest or any Tender not necessarily accepted.

TO LET.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

Please note that advertisements under this heading must be received at the office not later than 5 p.m. on Thursdays.

A GOOD opening to start a Chemist's Business is at 523 King's Road, Chelsea; thickly populated neighbourhood; no opposition; low rent; only fully qualified gentleman with capital need apply. Address, W. Shaw, Agent and Valuer, 91 Marlborough Road, S.W.

CHEMIST and Dispenser wanted to open one of the fine New Shops recently erected in the main road at Leytonstone; 20 feet double-fronted; front fitted to suit tenant; capital house, bath (hot and cold); close to contemplated new station; rent moderate; well suited for a Branch or otherwise. Apply to Mr. Tewson, 72 Finsbury Pavement.

APPRENTICESHIP.

APPRENTICE in first-class Dispensing and Retail; under personal supervision; a gentlemanly youth passed preliminary preferred (or equivalent); healthy neighbourhood; comfortable home (indoors); moderate premium. Apply, Mr. Senior, Chemist, Eastbourne.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

Please note that advertisements under this heading must be received at the office not later than 5 p.m. on Thursdays.

WANTED, Ledger Clerk; must have had experience in the Drug and Patent Medicine business. Apply, Goodall, Backhouse & Co., Leeds.

WANTED, early in January, good Junior for dispensing business; indoor. Apply, A. H. Ellithorne, 8 York Place, Ball's Road, Birkenhead.

WANTED, a Junior Assistant. Apply, stating age, height, and salary, W. Darling, Homoeopathic Chemist, 126 Oxford Street, Manchester.

JUNIOR Clerk with some knowledge both of the trade and figures. Apply by letter, stating age, to Evans, Lescher & Webb, 60 Bartholomew Close, E.C.

JUNIOR Assistant wanted; outdoors; must have good references. State full particulars, age, height, and salary required, Markham & Co., Market Place, Darlington.

OUTDOORS, for Store trade; Counterman; tall; gentlemanly appearance and address; salary £75. Usual particulars and c.d.v. to Wand, Chemist, Leicester.

WANTED, a Qualified Assistant, South Coast; short hours; outdoors. Full particulars to H. R., the Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WHOLESALE.—Assistant wanted for Wet Counter; must know the business thoroughly, and be well recommended. Apply, stating age, experience, and salary expected, to John Mackay & Co., Canning Street, Edinburgh.

ASSISTANT wanted after Christmas; about 22 or 23; fashionable seaside town; personal interview in London by appointment on 25th or 26th. Apply, by letter only with full particulars, to C. P., 88 Clive Road, West Dulwich.

WANTED, a Bookkeeper with experience in both Retail and Wholesale; preference will be given to one who can travel occasionally if necessary. Apply, with references and full particulars, Hy. S. Hogg, Manufacturing Chemist, Ulverston.

REQUIRED, in a Manufacturing Pharmaceutical Laboratory, a young qualified Pharmacist as Assistant. Apply by letter, stating age, salary, and full particulars as to experience, to A. Y., c/o Crossley, Moor & Co., Advertising Agents, 57A Coleman Street, E.C.

FOR the East.—First-class Assistant, qualified, with good all-round experience, capable of performing simple analyses and experienced in aerated-water making, for vacancy in large pharmacy in the East; liberal terms for a suitable man. By letter only, to Dakin Bros., 87A Leadenhall Street.

MANAGER for Branch Prescribing and General Light Retail business; must be thorough man of business, honest, straightforward, and pushing; Tooth Extractor and married preferred. Give full particulars of experience, age, salary required, and references to Robinson & Co., Chemists, 82 Waterloo Road, Hunslet, Leeds.

ASSISTANTS wanted; ages 22 to 28; used to quick or store trade preferred; senior must be of good address, experienced counter-man, and seeking a permanency. Apply, stating age, height, references, qualification, when disengaged, and salary required, in or out-doors. Brew, 10 Church Street, Malvern. Applications not answered within four days declined.

WANTED, early in January, good Junior; must be of good appearance and address; well up in dispensing; active and obliging; for good class business in small market town; short hours; no heavy trade; suit man reading up for Minor. Apply, with full particulars, to Statim, c/o Messrs. Wright, Layman & Umney, 50 Southwark Street, Boro', London.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

Please note that advertisements under this heading must be received at the office not later than 5 p.m. on Thursdays.

AS Assistant, or Dispenser to Surgeon; aged 27. J. E., 103 High Holborn.

LOCUM-TENENS; qualified; good references. "Locum," Trinity Square, Llandudno.

WANTED, situation as Branch Manager; qualified. Nemo, 195 Arundel Street, Sheffield.

ASSISTANT desires part-time engagement in London. Barnes, 37 Trinity Street, Norwich.

ASSISTANT; qualified; aged 25. X. Y. Z., 8 Henry Terrace, Palin Street, Nottingham.

JUNIOR; aged 20; tall; Loudon or large town preferred. Smith, 14 Market Place, Cirencester.

WHOLE or part time Assistant (24); London preferred. "Sanitas," 47 Church Street, Edgware Road.

ASSISTANT; in or near London; aged 25; height 5 ft. 7 in.; 7 years' experience. C. H., 26 Hornsey Rise Gardens, N.

JUNIOR; 21; 6 feet; 4½ years' experience; London preferred; disengaged; outdoors. "Gentian," 12 Norfolk Buildings, Bath.

PART-TIME or short hours; Assistant; London; outdoor; aged 22; good experience. C. G. Wright, 91 Grosvenor Park, S.E.

AS Traveller.—Chemist's manager, aged 30, wishes situation, Drugs or Druggists' Sundries; good address; energetic; highest testimonials as to character and ability; first-class town and country family, dispensing and agricultural experience, in England and Scotland. 155/34, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

*Applications for Agencies specially invited from Chemists
and Druggists in both Town and Country Districts.*

REDUCTION IN PRICE.

BY HER MAJESTY'S



ROYAL LETTERS PATENT.

TAYLOR'S SUPER A1 FLAX LINT.

(INVENTED 1850.)

In 1-lb. Packages, per lb. 3/3.

In 1-oz. Packages, per lb. 3/9.

This LINT, unequalled by any other, has been before the Public for nearly Forty Years, during which time it has been most extensively used in the British Army and Navy, in a large number of British and Foreign Hospitals, and by the Medical Profession. Its advantages are that, being made from fine Flax Fibre, it is perfectly free from all impurities, and, for Surgical purposes especially, is infinitely superior to Lint made from any other material; it also tears both ways. The One Ounce Packages will be found most convenient for Surgeons, Dentists, and the Public generally. It is put up in small Boxes, as a Razor Cleanser and Renovator, and for other Family purposes.

Packages having the Signature of the Patentee alone are genuine.

W. G. Taylor

Sole Manufacturers of "Taylor's Patent Flax Lint."

PRODUCED ONLY AT CHARFORD MILL, BROMSGROVE, WHERE THE LINT IS SUPPLIED WHOLESALE.

SOLE WHOLESALE AGENTS:

S. MAW, SON & THOMPSON, 7 to 12 Aldersgate Street, LONDON.

Maw's Super Quality Surgeons' Lint
2s. per lb.

Maw's Superior Hospital Lint,
1s. 9d. per lb.

Maw's No. 2 Hospital Lint,
1s. 6d. per lb.

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

S. MAW, SON & THOMPSON, LONDON.

THE INHALANT
TRADE MARK
"SPIRONE"
TRADE MARK.
FOR THE TREATMENT AND CURE OF ALL
DISEASES OF THE LUNGS, WINDPIPE, NOSE & THROAT.

CLAIMS TO BE A

Specific for all Congestive and Inflammatory Conditions of the Respiratory Apparatus,
And will be found efficacious in

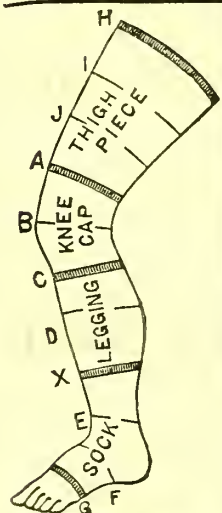
COUGHS AND COLDS, ASTHMA, BRONCHITIS

Inflammation and Congestion of the Lungs, Pneumonia, Pleurisy, Whooping Cough, Croup, Diphtheria, Pharyngitis, Laryngitis, Catarrh, Sore Throat, Quinsy, Enlarged Tonsils, Hoarseness, Loss of Voice, Colds in the Head, Hay Fever, and all other Complaints of the Respiratory Organs.

None Genuine except such as bear the above Trade Mark "SPIRONE" and the Signature of the Inventor upon the Bottles, on the Label over the Cork, and on the Wrapper.

Retail Price 4s. 6d. and 11s. per Bottle. Set of Apparatus for Administration, 15s.
PAMPHLETS AND SHOWCARDS FREE ON APPLICATION.

THE SPIRONE COMPANY, LIM., Depot—17a Duke Street, **LONDON, W.**
MANCHESTER SQUARE,



Patent Pile, Protected, 14,613.
The Pile lying over the India-rubber Cords, protecting them and forming a smooth soft surface to the limb.

ELASTIC SURGICAL STOCKINGS, APPLIANCES, &c.

Having had a large demand for Elastic Appliances I have increased my plant by the addition of a number of my Patent Machines, and am now enabled to make stock in advance, of all usual qualities of Elastic Stockings, &c., and forward order for usual makes and sizes at once.

Very common low-price articles are being made in the trade which I do not stock or recommend, but if ordered, I can make to any sample of quality at less price than any other manufacturer, on account of the superiority of my Patent Machinery.

Handbook of my Manufactures will be forwarded to any Surgical Instrument Maker or Chemist free.

MAGNETIC BELTS & APPLIANCES.

Elastic Surgical Stockings, Knee Caps, &c.
Patent Spiral Seamless Elastic Stockings, &c.
Patent Pile Surgical Elastic Stockings.
Elastic Supports for Lawn Tennis, Cricket, Lacrosse, and other Athletic Sports.
Bath and Rubbing Gloves.
Bathing Caps and Belts.

Trusses of every description.
Poro-plastic Jackets.
Bandages — India-rubber, Elastic, Lint, Cotton, Sayres', &c.
Chest Expanding Braces.
Horse Ear Caps & Veterinary Appliances.
Suspensory Bandages.
Ladies' and Gentlemen's Belts.

Hot Water Bottles and Covers, Respirators, Inhalers, Bronchitis Kettles, Throat Sprays, Waterproof Coats, Cloaks and Driving Aprons, Footballs, Shin Guards, and Athletic Appliances, Druggists' Sundries, Invalid and Nursery Appliances, &c.

MANUFACTURER AND PATENTEE:

J. H. HAYWOOD, CASTLE GATE, NOTTINGHAM.

London Agent—HENRY C. QUELCH, St. Paul's Chambers, 1 Ludgate Square, E.C.

BARCLAY & SONS, Ltd.

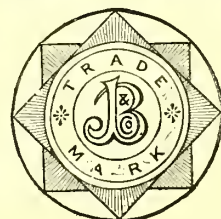
A DECIDED "HIT"! (No Maker's Name on Label.)

**6d. GLYCERINE & CUCUMBER
JELLY.**Put up in Handsome 2-oz. Screw-cap Bottles,
3/6 per dozen (1 dozen in a box).**95 FARRINGTON ST., LONDON, E.C.**

PLEASE SEND FOR ANNUAL CATALOGUE.

**M. BAILEY & CO.
MANUFACTURERS OF DRUGGISTS' SUNDRIES.**

M. B. & Co. beg to call the attention of the Trade to the following articles manufactured by them:—

Glass Syringes, Nipple Shields, Breast Exhausters, Fittings for Feeding
Bottles, Tubes, and Tube Work in all its branches, &c., &c.Sole Proprietors and Manufacturers of J. Brooks & Co.'s celebrated Specialities:—Winter Cream,
Lip Salve, Solidified Camphor Cream, Glycerine Jelly, Perfumery, &c., &c.Buyers are cautioned against imitations of these World-renowned preparations. None are genuine unless bearing
our Registered Trade Mark.

MAY BE OBTAINED THROUGH ANY OF THE WHOLESALE HOUSES. WHOLESALE AND EXPORT ONLY FROM

M. BAILEY & CO., 32 and 34 Buckingham Road, KINGSLAND, N.**TO WHOLESALE DRUGGISTS, &c.**Buyers of the following are invited to send for Samples and Prices before placing their
Orders elsewhere. They will find it to their **ADVANTAGE** to do so.**BENZINE.** In 6d. and 1s. bottles.**CEMENT.** To retail 1d. and 3d.**CASTOR OIL** (Crystal, Tasteless). In bulk, or packed in
bottles from $\frac{1}{2}$ oz. to 1 lb.**COD LIVER OIL.** In casks, or packed in 6d. and 1s.
bottles.**CORN SOLVENT.** To retail 1d. and 3d.**FEEDING BOTTLES.** All kinds.**FLY PAPERS.****FULLER'S EARTH** (Powdered). In bulk or in packets.**GLYCERINE.** In bulk or packed in bottles, from $\frac{1}{2}$ oz. to 1 lb**COLZALINE** (or Golden Oil). Our Speciality.**HAIR OIL.** In bulk, or packed in bottles, from $\frac{1}{2}$ oz. to
1 lb.**INSECT POWDER.** In bulk, or packed in 1d., 2d., 3d.,
and 6d. boxes.**LIME CREAM.** In 6d. and 1s. bottles.**MENTHOL CONES.** Extra Powerful Brand. To retail
1d., 2d., 3d., 4d., and 6d.**MACHINE OIL.** In bulk, or in 1d., 2d., and 6d. bottles.**POMADES.** All kinds, to retail from 1d. upwards.**PILLS.** In bulk, or packed in 1d. boxes.**SEIDLITZ POWDERS.** In boxes.**TOOTHACHE TINCTURE.** In 1d. and 3d. bottles.In these days of competition, buyers should seek the best markets. We confidently state that no
other firm offers the advantages that we do.**WRITE FOR SAMPLES AND PRICES.****W. & H. JACKSON, 14 MANESTY LANE, LIVERPOOL.**

FRANCIS' CAPSICUM LEAVES

REGISTERED.—More effectual than Mustard Leaves. May be obtained through any Wholesale House. 6d. Tins, price 2s. 8d. per dozen. CAPSICUM is highly recommended in *The Lancet* by Sir J.—S—, M.D., and Dr. H—J—B— for the treatment of Rheumatism, Neuralgia, Bronchitis, Bronchial Catarrh, Sub-acute Gout, &c.



COMFORT FOR THE FEET.

Corns and Bunions may be removed, and enlarged Toe Joints reduced, by using *Thompson's New French Corn Plaster*. Sole Proprietor, M. F. THOMPSON, Homoeopathic Chemist, 17 GORDON STREET, GLASGOW, from whom the Plaster may be had in Packets, by post, for fourteen shillings. Those who are troubled with the discomfort of Corns or Bunions will be glad to have attention called to this remedy, as it removes pain very speedily. It is a simple Plaster, thin as silk, and comfortable to the foot.

Ask your Chemist for it, and take no Substitute.

Wholesale 9/6 per dozen, cash with order, post free. May also be obtained through London Wholesale Houses.

Walking is now really a pleasure to me. It is put up on Cards. "Very saleable."

ESCHMANN BROS. & WALSH, SOFT SILK FLEXIBLE CATHETER, GUARANTEED WITH WOVEN EYES.

To be had of all Surgical Instrument Makers and Wholesale Houses.



To be had of all Surgical Instrument Makers and Wholesale Houses.

THE SURGEONS' LINT, V.B. QUALITY.

The superior quality of Newsome's Absorbent Surgeons' Lint is universally admitted. The V.B. quality is quite pure and of great superficial area and exquisite softness. The C., D., E., and F. qualities are equally pure and absorbent; E. is stronger in fabric.

NEWSOME'S BLEACHED ROLLED BANDAGES, 3 in., 2½ in., 2 in. Also SURGICAL ABSORBENT OPEN BANDAGES Specially Bleached & Grey Carded Cotton Wools, Absorbent & Bleached & Grey Waddings; also Sheet Waddings, Tow, &c.

THE TRADE SUPPLIED THROUGH THE LONDON AND PROVINCIAL WHOLESALE HOUSES, OR FROM

C. NEWSOME, MANUFACTURER, BEEHIVE MILLS, ANCOATS, MANCHESTER.

London Agents—B. PRATT & CO., 1 Wood Street, E.C.

Telegraphic Address—"Newsome, Ancoats," Manchester.

KEARSLEY'S Widow Welch's FEMALE PILLS.

These Pills are Universally acknowledged to be the Genuine, and Druggists may safely recommend them.

CAUTION!

The Proprietors of Kearsley's Original Widow Welch's Female Pills find it incumbent on them to caution the purchasers of these Pills against various imitations by parties who have no knowledge of their peculiar preparation, the Original Recipe having been sold to the late G. Kearsley, of Fleet Street, whose Widow found it necessary to make an affidavit, for the protection of her property, in the year 1798. The Genuine Recipe for Widow Kearsley's Female Pills has been prepared by them for 100 Years! Chemists are particularly requested to remark that, as a testimony of authenticity, each bill of directions contains an affidavit, and bears the signature of "C. KEARSLEY," in writing, also engraved on the Government Stamp, and each box is wrapped in WHITE paper.

All purchasers of one dozen (13 boxes) can have, carriage paid, 100 copies of KEARSLEY'S LADIES' COMPANION, printed with Name and Address.

Price 27s. per dozen, subject to usual Discount. Special Quotations to Shippers and for large quantities on application to

J. SANGER & SONS, 489 OXFORD STREET, LONDON, W.



THE MEDICAL ELECTRODE.

An Electro-Chemical combination, entirely unique CURES Blindness from Cataracts, Short Sight, Weak and Sore Eyes, &c.; deafness from Fever, Colds, &c.; Noises in the Head; Catarrh; Influenza; Nervous Affections, Headache, Neuralgia, Toothache, &c.; Sore Throat, Ulcerations, Bronchitis, Asthma, &c., and all Diseases of the Eye, Ear, Head, Nose, or Throat. Simple, without shock, and can be used at any age and by a whole family.

Particulars Free.

Price 50/-; or extra special (with separate appliance for Chronic Deafness), 60/-. Postage, 2½d.

Agents wanted where not represented.

Special Terms to the Trade.

THE MEDICAL ELECTRODE
M. HILLOCK & CO., 41 Berners St., Oxford St., LONDON, W.

IT WILL PAY YOU WELL

to send for a Complete detailed List of

TOM BROOKS'S RELIABLE RECIPES, SPECIALS, &c.

All are warranted practical. Many preparations in actual commerce with daily increasing sale.

Just Published, a New List of FIFTY, including—

ANTI-DRINK PILLS—Answer splendidly—positive proofs.

UNC. ECZEMA (Sir A. Clark's)—Has cured many bad cases.

CONCD. POPPIES & CAMOMILES—Saves time & trouble—Sells well

MIST. OCCASIONAL FOR LADIES (Dr. Carter's)—Quite safe invariably brings on desired result.

GLYCERINE CREAM—Perfection of Winter Toilet requisites, elegant and non-sticky. [1]

GLYCERINE & LICORICE BALM—Best all-round Cough Mixture ever offered. 2-oz. Bottles cost 2s. doz.; pleasant taste and nice appearance.

Above 6 Recipes, with full directions, post free 2/6.

TOM BROOKS, Chemist, Hornsey, LONDON, N.

WARRICK

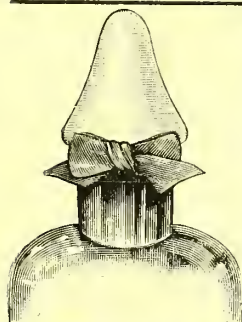
THE LILAC

Flower - Flavoured CACHOUS.

Real Violets, Real Roses, Real Heliotrope, Real Lavender Cachous.
3/- per lb., splendidly labelled; 4/- per dozen Boxes, gold embossed on calf.

18 OLD SWAN LANE, LONDON, E.C.

BROTHERS.



With "Beaulette."

PATENT "BEAULETTES" TRADE MARK.

Under the title of "BEAULETTE" this ingenious little article has been invented to enable small manufacturers of perfumes and other similar preparations to finish their goods in equal style to those who employ skilled hands for the purpose. The illustration shows fully its advantages, and the cost being very trifling, it need hardly be pointed out that the general appearance of the goods and

THE WINDOWS IN WHICH THEY ARE DISPLAYED
are very much improved by its use.

DIRECTIONS.—Hold the "BEAULETTE" flat against the neck of the bottle in a line with the centre of the label with the left hand, then loop the elastic ring over the stopper or cork with the right.

PRICE 4.- PER CROSS.

SOLD BY ALL THE LEADING WHOLESALE HOUSES.

Suitable alike for Sprinkler Bottles or Paper Caps.

BEAULETTE CO., 48 Greek St., Soho Square, LONDON, W.

Sample Box, containing 3 dozen assorted colours, on receipt of 1/- P.O.

R C TREATT

IMPORTER OF

Musk Civet Ambergris Attar - of - Rose

ESSENTIAL OILS

Dunster House Mining Lane

LONDON

Wholesale
and
Export
only.

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ON
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AND
PRICE LIST

EDWARDS' 'HARLENE'



**WORLD-RENOWNED
HAIR PRODUCER & RESTORER.**

1/-, 2/6, 3/6, and 5/6 per Bottle.

Liberal Terms to Shippers and the Trade.

SPECIAL NOTICE TO THE RETAIL TRADE.

Handsomely-framed Show-card, in 15 Colours (size 16½ by 21½).
A real work of art. Now ready, and will be supplied free, on application, or may be procured through any Wholesale House. Also
Counter Bills bearing the seller's name and address.
OPAL GLASS TABLETS fixed on windows if desired.

EDWARDS & CO.

95 HIGH HOLBORN, W.C.



Bottles. | Special Cheap Quotations for net Cash on delivery. | Bottles.

EDWARD TAYLOR & CO.

GLASS BOTTLE MERCHANTS,

119 & 121 WOOD ST., LIVERPOOL.

are now prepared to supply the New Shape Rounded Edge Dispensing Bottles, Plain or Graduated, in two qualities, at the following low prices:—

		3 oz.	4 oz.	6 oz.	8 oz.	10 oz.	12 oz.	16 oz.	20 oz.
Best Quality, Blue Tinted ..	..	8/	8/	8/9	8/9	12 6	12	16 5	22 per gross.
Ordinary ..	..	7/	7/	7 9	7 9	10 6	12/	15/	20/

SPECIAL QUOTATIONS GIVEN FOR WHITE FLINT.
Ordinary shape Ovals or Flats, 3d. per gross less than the above prices, either quality.

FEEDING BOTTLES COMPLETE.

Pure White Flint Glass Bottle, Screw Glass Stopper, Black Tubing and Teats ..	..	..	..	..	..	..	..	..	30 per gross.
Green Flint Glass Bottle, Screw Glass Stopper, Black Tubing and Teats ..	..	..	..	..	..	..	..	..	28 6 "
" " Boxwood Top Cork, " " " " " " " " " "	..	..	..	..	..	..	..	..	23 "

We supply a Special 6d. Feeder, White Flint Glass Bottle, Screw Glass Stopper, Glass or China Unions, best Seamless Teat and Black Tubing, each Bottle in separate Box, with Bottle and Tube Brush, 48/ per gross.

ROUND POMADE BOTTLES.

	2 oz.	3 oz.	4 oz.
Boxwood Top Cork ..	.. 11/6	13/	14/6 per gross.
Red Terra Cotta Cap ..	.. 11/	13/	14/
Metal Screw Cap ..	.. 13 6	15 6	18/

Very Heavy Pale Green Flint Panelled Bottles, suitable for Glycerine, Cough Mixture, &c.

1 1/2 oz., looks as large as 2 oz. ..	..	..	..	..	8/6 per gross.
2 oz. " " 3 oz. ..	..	..	..	..	9 6 "
3 oz. " " 4 oz. ..	..	..	..	..	10/ "
5 oz. " " 6 oz. ..	..	..	..	..	11/ "

ANY OTHER KINDS OF BOTTLE QUOTED CHEAP ON APPLICATION.
SPECIAL QUOTATIONS GIVEN TO SHIPPERS.

THE "STIPENDUM" STOPPER CO., LIM.

47 LAMB'S CONDUIT STREET, LONDON, W.C.,

Manufacture the following Specialities—

- "STIPENDUM" CORK STOPPERS, in all sizes.
- "STIPENDUM" CORK-LINED CAPS, for Pomade Bottles.
- "STIPENDUM" SCREW CAPS, for Pomade Bottles.
- "STIPENDUM" OPENERS, for Stoppered Aërated Water Bottles.
- "STIPENDUM" GREASE-PROOF COVERED POTS

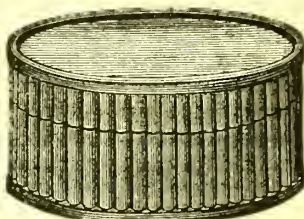
IN TERRA COTTA, CHOCOLATE, AND BLACK.

The Grease-Proof Covered Pots have perfectly fitting lids, are practically unbreakable, and the only article really answering the purpose intended.

The following Analytical Report should be noted by the trade:—

London, January 5, 1891.

"We have examined the two covered pots marked November 21, 1890, one containing strong nitrate of mercury ointment, and the other iodine ointment, the object being to discover—(1) Whether the ingredients of which the pots are composed have in any way affected the ointments; (2) Whether the pots have been deteriorated by the action of the ointments.



We hereby certify that no trace of any of the ingredients of the pot can be discovered in either of the ointments, and further that the pots themselves were found not to have been acted on at all; and we further consider 'Stipendum' admirably adapted for such pharmaceutical preparations.

Signed, C. T. KINGZETT, F.I.C., F.O.S.
(Ex Vice-President Society of Public Analysts)
R. H. HARLAND, F.I.C. F.O.S.
(Public Analyst)."

To be had of all Druggists' Sundriesmen.

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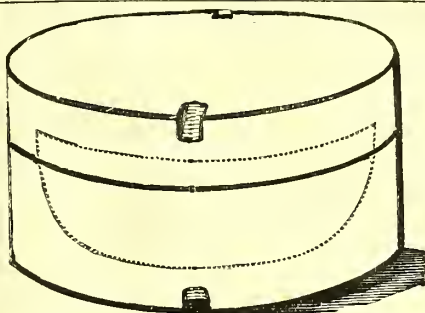
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*These Pots are beautifully
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1 dr.	2 dr.	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{1}{12}$	$\frac{1}{16}$	$\frac{1}{20}$	$\frac{1}{24}$	8 ounces.
1/6	1/6	1/6	1/8	1/10	2/	2/3	2/10	3/8	4/6	5/6			per doz.

THIN FOR DISPENSING—

$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{1}{12}$	$\frac{1}{16}$	$\frac{1}{20}$	$\frac{1}{24}$	8 ounces.
1/7	1/9	2/	2/2	2/5	3/	4/	5/	6/	6/	6/	per doz.

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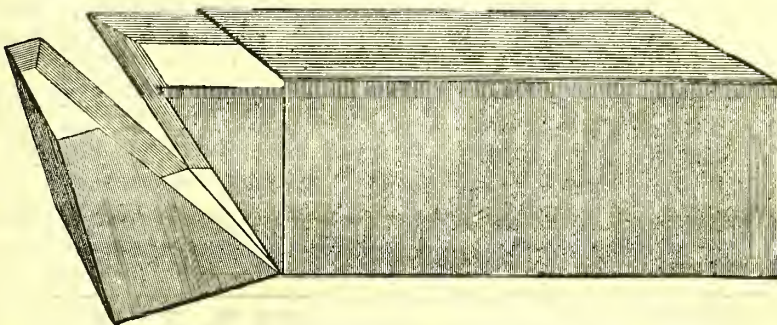
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For 6 12 18 24 Powder

White Enamel

6/9 7/9 8/9 9/9 gross

Purple ... 7/9 8/9 9/9 10/9 ..



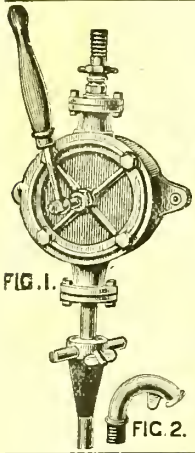
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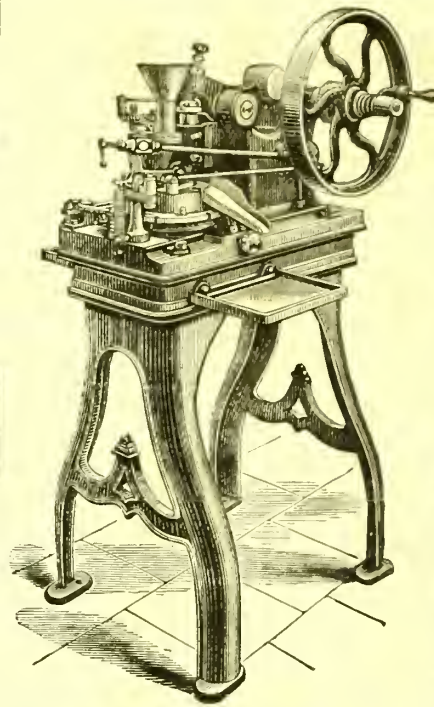
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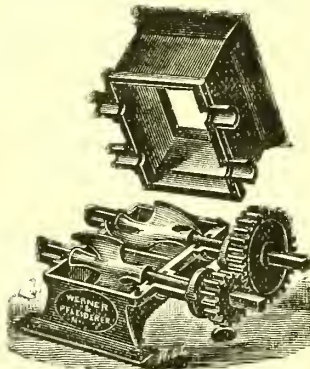
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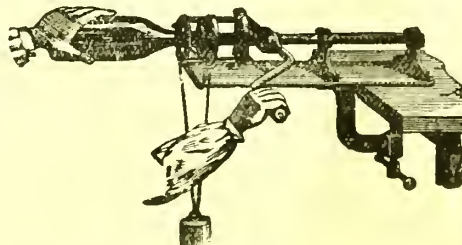
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Per gall.		
5 0 .. 20 and 40 gall. Casks (casks free, not returnable)	3 6	per gall.
1 1½ .. UNIVERSAL PERFECT PURIFIER (in bottles) ..	8 6	per doz.

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1 0 each Canisters, in boxes of 1, 2, or 3 doz. ..	8 6	per doz.
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2 6 .. Toilet (Scented), in Boxes containing 6 Tablets	1 9	"
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3 0 .. Sublime Toilet (Scented) ..	2 0	"
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1 0 each .. Tooth Powder, in Metal Boxes ..	7 0	per doz.
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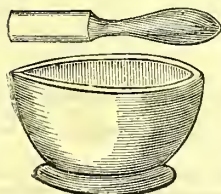
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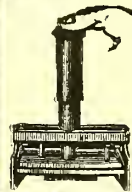
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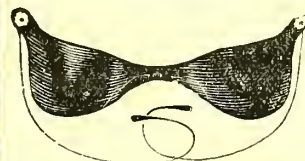
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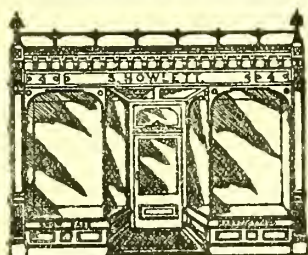
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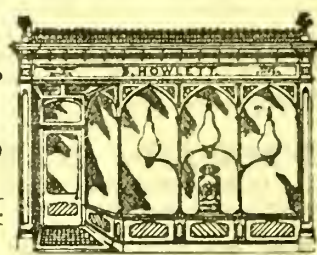
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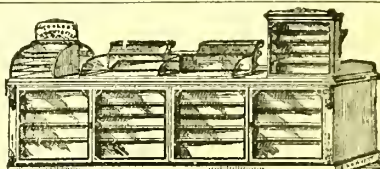
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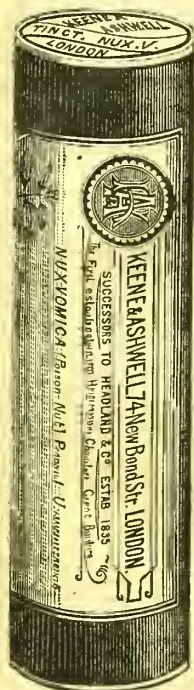
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